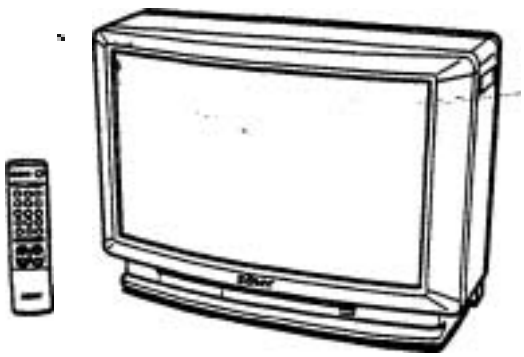
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

SERVICE MANUAL



GE Model
KV-W28MN11
Chassis No. SCC-H22A-A
KV-W32MN11
Chassis No. SCC-H22B-A

HK Model
KV-W28MH11
Chassis No. SCC-H23B-A
KV-W32MH11
Chassis No. SCC-H23A-A

WB Model
KV-W32MH11
Chassis No. SCC-H24A-A

AG-1 CHASSIS

MODELS OF THE SAME SERIES	
KV-W28MH11/W28MN11	
KV-W28MH2/32MH2	
KV-W32MH211/W25M111/W28MN31	

SPECIFICATIONS

Power requirements
110-240V AC, 50/60Hz
Power consumption
240 W
Television system
B/G, I, D/K, M
Color system PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58
Stereo system NICAM Stereo B/G, I ; A2 (German) stereo B/G
Channel coverage
See "Channel coverage" at the bottom.
Antenna 75-ohm external antenna terminal for VHF/UHF
Audio output (speaker)
15 W × 2

Number of terminal
Video Input: 4, Output: 1
Audio Input: 4, Output:1
S1 Video/S Video
Input: 4, Output: 1
Y: 1 Vp-p, 75 ohms, unbalanced, sync negative,
C: 0.286 Vp-p, 75 ohms

Picture tube HD Trinitron
Tube size (measured diagonally)
KV-W28: 28 inches
KV-W32: 32 inches
Screen size (measured diagonally)
KV-W28: 66 cm
KV-W32: 76 cm

MICROFILM

TRINITRON® COLOR TV
SONY®

Dimensions (w/h/d)
KV-W28: 750 × 520 × 528 mm
KV-W32: 905 × 600 × 585 mm

Mass
KV-W28: 49.5 kg
KV-W32: 73 kg

Accessories

Supplied
Remote commander (1)
Size R6 (AA) battery (1)
Conversion mains plug

Optional
KV-W28: TV stand SU-W28
KV-W32: TV stand SU-W32

Design and specifications are subject to change without notice.

Channel coverage

M E/ASIA/CATV W EURO

Receivable channel	Channel display
E-2 to E-12	C02 to C12
E-21 to E-69	C21 to C69
S-01 to S-03	S42 to S44
S-1 to S-41	S01 to S41
Indonesia	
1A	C01
2 to 11	C03 to C12
Morocco	
M-4 to M-7	C70 to C73
M-8 to M-10	C8 to C10
New Zealand	
1	C01
2 to 11	C03 to C12
27 to 62	C27 to C62

HK/UK

Receivable channel	Channel display
Hong Kong, United Kingdom	
B-21 to B-68	C21 to C68
Ireland	
A to J	C01 to C09
South Africa	
4 to 13	C04 to C13
21 to 68	C21 to C68

AMERICA/CATV AMERICA

Receivable channel	Channel dispia
2 to 79	C02 to C79
A-1	S99
A-2	S98
A-3	S97
A-4	S96
A-5	S95
A-6	S06
A-7	S05
A-8	S01
A to W	S14 to S36
AA to CCC	S37 to S65

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

TABLE OF CONTENTS

SECTION 1
GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

WARNING

To prevent fire or shock hazard, do not expose the TV to rain or moisture.
Dangerously high voltages are present inside the TV. Do not open the cabinet. Refer servicing to qualified personnel only.

For general safety:
- Do not expose the TV to rain or moisture.
- Do not open the rear cover.

For safe installation:
- Do not block the ventilation openings.
- Do not install the TV in hot, humid or excessively dusty places.
- Do not install the TV where it may be exposed to mechanical vibrations.

For safe operations:
- Do not operate the TV on anything but 110-240 V AC.
- Do not operate the TV if any liquid or solid object falls in it—have it checked immediately.
- Do not keep the TV plugged in if you are not going to use it for several days.
- Do not pull the power cord to disconnect the TV. Pull it out by the plug.

Caution
Avoid touching the screen surface and take care not to scratch it with hard objects.

Table of contents

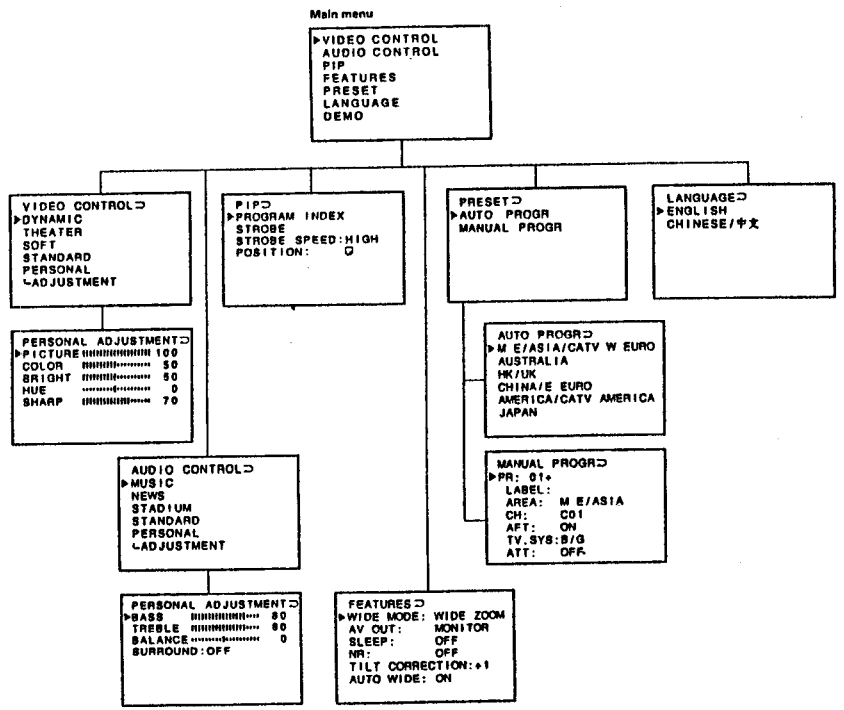
Getting Started

Operations

Additional Information

Introducing the menu

You can preset channels and set the wide mode, picture quality, sound, and other settings using the on-screen menus. You can use the buttons on both remote commander and the TV to operate the menus.



Getting back to the previous menu

Press △ + or ▽ – to move the cursor (▶) to the first line (⊃) of each menu (except for the main menu), and press ENTER.

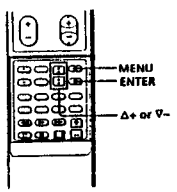
Cancelling the menu screen

Press MENU.

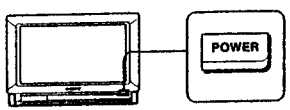
Notes
- If more than 60 seconds elapse after you press a button, the menu screen disappears automatically.
- DEMO in the main menu briefly introduces the main features available for the TV. Press any button on the remote commander to stop this function.

Changing the menu language

If you prefer Chinese to English, you can change the menu language. You can use the buttons on both the remote commander and the TV.

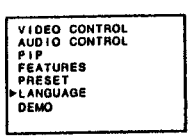


1 **Press POWER on the TV.**

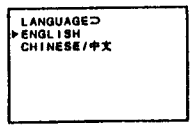


2 **Press MENU.**

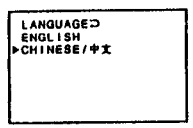
3 **Press Δ + or ∇ – to move the cursor (▸) to LANGUAGE.**



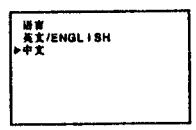
4 **Press ENTER.**



5 **Press Δ + or ∇ – to select CHINESE.**



6 **Press ENTER.**



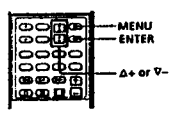
7 **Press MENU to return to the normal screen.**

Presetting channels

You can preset TV channels easily by storing all the receivable channels automatically. You can also preset channels manually or skip program positions (pages 19 and 20).
You can preset channels using the buttons on the TV as well as those on the remote commander.

Presetting channels automatically

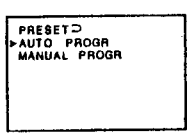
You can preset up to 100 TV channels in numerical sequence from program position 1.



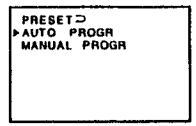
1 **Press MENU.**

2 **Press Δ + or ∇ – to move the cursor (▸) to PRESET.**

3 **Press ENTER.**



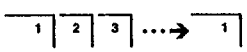
4 **Press Δ + or ∇ – to select AUTO PROGR.**



5 **Press ENTER.**

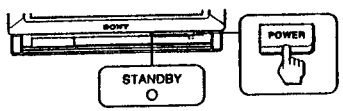
6 **Press Δ + or ∇ – to select your area (channel system).**
For the areas allocated in each channel system, see "Channel allocation" on page 24.

7 **Press ENTER.**
Presetting starts from program 1.

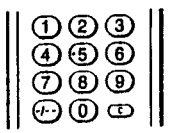


Watching the TV

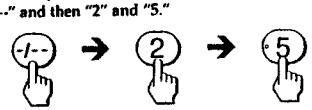
1 Select the TV program you want to watch.
Press the number buttons or PROGR +/–. The TV turns on automatically and the selected program appears.
When the STANDBY indicator on the front of the TV is not lit, press POWER on the TV, and select the program position.



To select a program position directly
Press the number buttons.



To select a two-digit program position, press "-/--" before the number buttons.
For example, to select program position 25, press "-/--" and then "2" and "5."



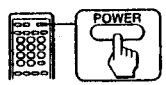
To scan through program positions
Press PROGR +/– until the program position you want appears.

To select a channel directly
Press C (once for VHF/UHF channels, twice for cable TV channels), then press the number buttons (two-digit number for VHF/UHF channels, three-digit number for cable TV channels). For example, to select the VHF/UHF channel 4, press C, 0 then 4.

2 Press VOL +/– to adjust the volume.

Switching off the TV

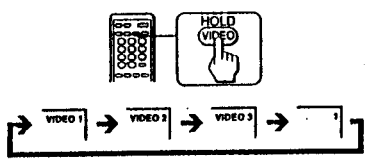
To switch off the TV temporarily, press POWER on the remote commander.
The STANDBY indicator lights.



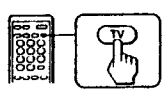
To switch off the TV completely, press POWER on the TV.

Watching the video input

Press VIDEO/HOLD.

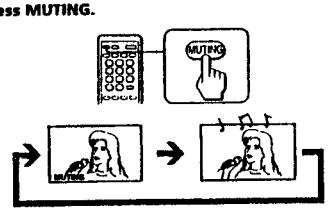


To watch TV, press TV, the number buttons or PROGR +/–.



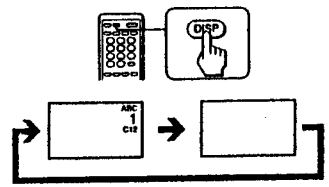
Muting the sound

Press MUTING.



Displaying on-screen information

Press DISP.



Note
- When you press DISP, the on-screen display shows the picture, sound and wide mode settings as well, all of which disappear after three seconds.

Setting the Sleep Timer

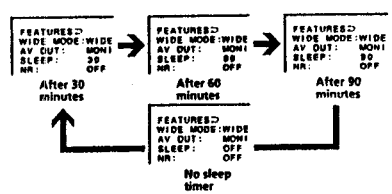
You can set the TV to turn off automatically after the period of time you set.

1 Press MENU.

2 Press Δ + or ∇ – to move the cursor (▶) to FEATURES, and press ENTER.

3 Press Δ + or ∇ – to move the cursor (▶) to SLEEP, and press ENTER.

4 Press Δ + or ∇ – until the time (in minutes) you want appears.



5 Press ENTER.

To cancel the Sleep Timer, select OFF, or turn the TV off.

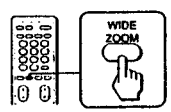
Watching the picture in wide mode

You can enjoy a variety of wide-mode pictures. Select the appropriate mode for the type of picture. Typical uses are as follows.
You can select wide mode using the menu as well as the buttons on the remote commander. Select WIDE MODE from the FEATURES menu, then select the desired mode.

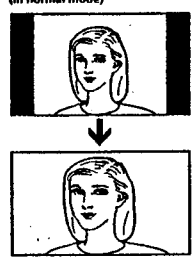
Viewing regular TV programs

Normally, use widezoom mode.

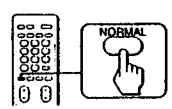
Press WIDEZOOM.

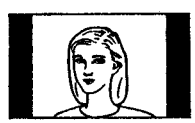


Conventional picture (in normal mode)



To view a picture in the conventional size, press NORMAL.

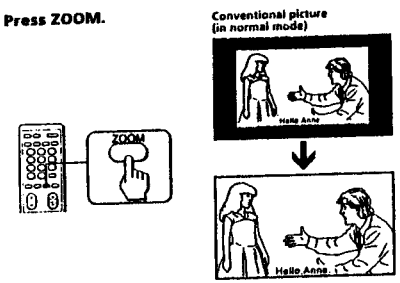




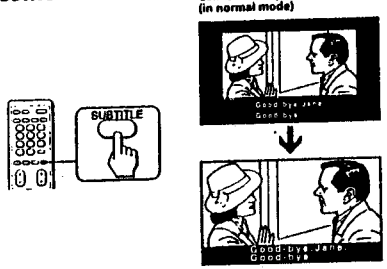
Viewing a movie picture with black bands

Use zoom or subtitle mode to view a movie picture with black bands.

Press ZOOM.



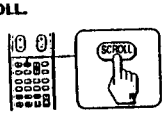
When the subtitles are lost in zoom mode, press SUBTITLE.



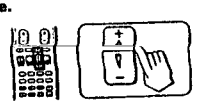
To scroll the picture up or down

When the subtitles are lost even in subtitle mode, you can scroll the picture up or down to view them. The picture scrolls up or down within the range of –5 to +5. You can also use the scroll function in widezoom and zoom modes. Using the scroll function in widezoom mode changes the vertical size of the picture.

1 Press SCROLL.



2 Press Δ + or ∇ – to adjust the position of the picture.



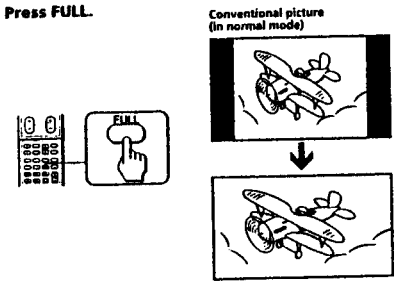
Note

- If you display the PIP screen in zoom mode or scroll the picture with the PIP screen in zoom mode or subtitle mode, the PIP screen may be lost. However, this does not indicate a malfunction.

Viewing a video game screen

When you view a video game screen with dynamic effect, use full mode.

Press FULL.



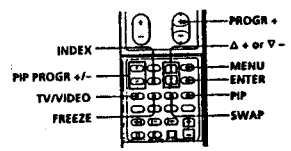
To switch the auto wide function

When AUTO WIDE is set to ON, the factory setting, the TV automatically displays the picture on the screen in full mode if an S1 Video signal is received. If you want to select another mode for the signal, set AUTO WIDE to OFF.

1 **Press MENU.**
2 **Press Δ + or ∇ – to move the cursor (▶) to FEATURES, and press ENTER.**
3 **Press Δ + or ∇ – to move the cursor (▶) to AUTO WIDE, and press ENTER.**
4 **Press Δ + or ∇ – to select OFF, and press ENTER.**

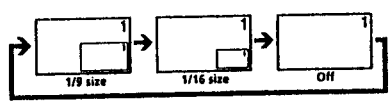
Using the Picture-in-Picture features

You can display a Picture-in-Picture (PIP) screen (small picture) within the main picture of a TV program or a video input.
For the KV-W28, you have to use the connected VCR's built-in tuner to enjoy two different TV programs simultaneously.



Displaying PIP

Press PIP.

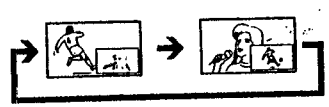


Selecting a TV program or video input in the PIP screen

To select a TV program, press PIP PROGR +/– (yellow buttons) for the KV-W32.
For the KV-W28, select a TV program with the PROGR +/– buttons on the connected VCR.
To select a video input, press TV/VIDEO.

Swapping pictures between the main and PIP screens

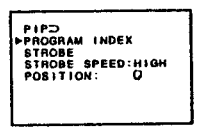
Press SWAP.



Changing the position of the PIP screen

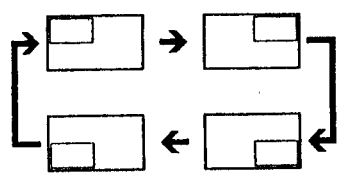
1 Press MENU.

2 Press Δ + or ∇ – to move the cursor (▶) to PIP, and press ENTER.



3 Press Δ + or ∇ – to move the cursor (▶) to POSITION, and press ENTER.

4 Press Δ + or ∇ – to select the position you want.
Pressing Δ + changes the position as shown below.
Pressing ∇ – changes the position in reverse order.



Note

- If you display the PIP screen in zoom or subtitle mode, you can move the PIP screen only to the lower left or the lower right.

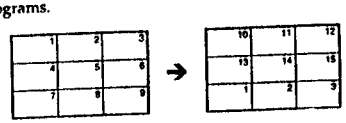
Freezing the PIP screen

Press FREEZE.
To restore the normal picture, press FREEZE again.

Checking all the preset programs (Program Index)

Press INDEX.
The nine preset programs appear in the separated screen in sequence, switching the picture for each second. The sound is muted. Then next nine sequential programs appear. After all the preset programs are displayed, the programs switch the picture with the sound for each five seconds.

Pressing PROGR + also switches to the next nine programs.



To restore the normal picture

Press the number buttons which you want to watch (e.g., for program 25, press -/--, 2 and 5). Pressing INDEX also restores the normal picture.

Notes

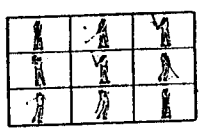
- You can also display nine sequential TV programs using the menu. Select PROGRAM INDEX from the PIP menu, then press ENTER.
- If you display different TV systems in the Program Index screen, the size of the separated screens may be different.

Displaying frame-by-frame pictures (Strobe)

1 Press MENU.

2 Press Δ + or ∇ – to move the cursor (▶) to PIP, and press ENTER.

3 Press Δ + or ∇ – to move the cursor (▶) to STROBE, and press ENTER.



To select the strobe speed

Select STROBE SPEED from the PIP menu, and press ENTER. Then select HIGH (3 seconds), MIDDLE (7 seconds) or LOW (12 seconds) with Δ + or ∇ –, and press ENTER.

To restore the normal picture

Select STROBE from the PIP menu again, and press ENTER.

You can also restore the normal picture with TV, VIDEO, PROGR +/–, POWER or Wide mode buttons.

Note

- You can hear the normal sound when using the strobe feature.

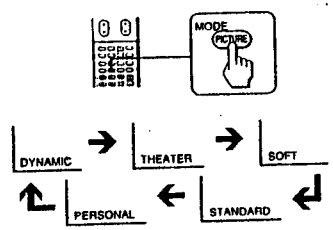
Notes on PIP features

- When you display a VCR picture in the PIP screen at a speed other than normal speed, the picture may be noisy depending on the VCR. The picture can be improved by selecting the smaller size of the PIP screen.
- If you display different color systems in the main screen and the PIP screen, the size of the PIP screen may be different and the PIP picture may be noisy. This is not caused by the malfunction of the TV.

Selecting the picture mode

You can select the picture mode using the menu as well as the PICTURE MODE button on the remote commander. Select VIDEO CONTROL from the main menu, then select the desired mode.

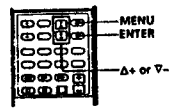
Press PICTURE MODE until the mode you want appears on the screen.



Select	To
DYNAMIC	Display more contrast picture
THEATER	Display darker and finely detailed picture suitable for movies
SOFT	Display softer picture suitable for video games or for viewing in a dark room
STANDARD	Display normal contrast picture
PERSONAL	Display the picture that is adjusted using ADJUSTMENT in the VIDEO CONTROL menu

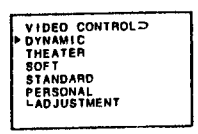
Adjusting the picture setting (ADJUSTMENT)

You can adjust the picture quality to suit your taste with the ADJUSTMENT option. The adjusted settings are stored in the PERSONAL option.

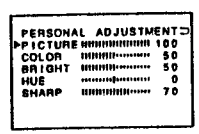


1 Press MENU.

2 Press Δ + or ∇ – to move the cursor (▶) to VIDEO CONTROL, and press ENTER.



3 Press Δ + or ∇ – to move the cursor (▶) to ADJUSTMENT, and press ENTER.



4 Press Δ + or ∇ – to move the cursor (▶) to the item you want to adjust, and press ENTER.

5 Press Δ + or ∇ – to adjust the item, and press ENTER.

Item	Press Δ + to	Press ∇ – to
PICTURE	Increase picture contrast	Decrease picture contrast
COLOR	Increase color intensity	Decrease color intensity
BRIGHT	Brighten the picture	Darken the picture
HUE	Make skin tones become greenish	Make skin tones become reddish
SHARP	Sharpen the picture	Soften the picture

6 To adjust other items, repeat steps 4 and 5.

7 Press MENU to return to the normal screen.

Note

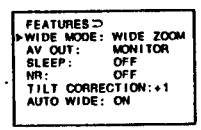
- You can adjust HUE for NTSC color system only.

Reducing the noise of the picture (NR)

You can reduce the noise level of the picture when the TV receives a weak signal or when you play a video tape that is in poor condition.

1 Press MENU.

2 Press Δ + or ∇ – to select FEATURES, and press ENTER.



3 Press Δ + or ∇ – to select NR, and press ENTER.

4 Press Δ + or ∇ – to select ON, and press ENTER.

To turn the noise reduction off, select OFF and press ENTER.

If the color of the picture is abnormal when receiving programs through the Ψ (antenna) terminal

Press COLOR SYSTEM on the TV or change the TV system setting from the menu as described below until the color becomes normal.

1 **Press MENU.**
2 **Press Δ + or ∇ – to move the cursor (▶) to PRESET, and press ENTER.**
3 **Press Δ + or ∇ – to move the cursor (▶) to MANUAL PROGR, and press ENTER.**
4 **Press Δ + or ∇ – to move the cursor (▶) to TV SYS, and press ENTER.**
5 **Press Δ + or ∇ – to change the TV system until the color becomes normal.**

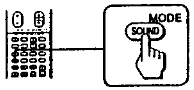
Note

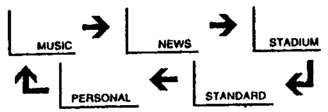
- Normally set COLOR SYSTEM to AUTO.

Selecting the sound mode

You can select the sound mode using the menu as well as the SOUND MODE button on the remote commander. Select AUDIO CONTROL from the main menu, then select the desired mode.

Press SOUND MODE until the mode you want appears on the screen.

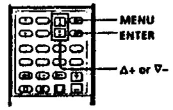




Select	To
MUSIC	Listen to music programs. It gives sound with a live concert effect.
NEWS	Listen to news program. A person's voice can be heard clearly.
STADIUM	Listen to sports program. It gives sound with a sports stadium effect.
STANDARD	Listen to sound other than music, news or sports program.
PERSONAL	Listen to the sound that is adjusted using ADJUSTMENT in the AUDIO CONTROL menu.

Adjusting the sound setting (ADJUSTMENT)

You can adjust the sound quality to suit your taste with the ADJUSTMENT option. The adjusted settings are stored in the PERSONAL option.



1 Press MENU.

```
▶VIDEO CONTROL
 AUDIO CONTROL
 PIP
 FEATURES
 PRESET
 LANGUAGE
 DEMO
```

2 Press Δ + or ∇ – to move the cursor (▶) to AUDIO CONTROL, and press ENTER.

```
 AUDIO CONTROL⊃
▶MUSIC
 NEWS
 STADIUM
 STANDARD
 PERSONAL
 ADJUSTMENT
```

3 Press Δ + or ∇ – to move the cursor (▶) to ADJUSTMENT, and press ENTER.

```
 PERSONAL ADJUSTMENT⊃
▶BASS            80
 TREBLE          80
 BALANCE          0
 SURROUND:OFF
```

4 Press Δ + or ∇ – to move the cursor (▶) to the item you want to adjust, and press ENTER.

5 Press Δ + or ∇ – to adjust the item, and press ENTER.

Item	Press Δ + to	Press ∇ – to
BASS	Increase the bass sound	Decrease the bass sound
TREBLE	Increase the treble sound	Decrease the treble sound
BALANCE	Increase the volume of right speaker	Increase the volume of left speaker

6 To adjust other items, repeat steps 4 and 5.

7 Press MENU to return to the normal screen.

Listening to surround sound

You can enjoy a surround sound effect that is like being in a movie theater or a concert hall when receiving stereo signals.

1 Press MENU.

2 Press Δ + or ∇ – to move the cursor (▶) to AUDIO CONTROL, and press ENTER.

3 Press Δ + or ∇ – to move the cursor (▶) to ADJUSTMENT, and press ENTER.

```
 PERSONAL ADJUSTMENT⊃
▶BASS            80
 TREBLE          80
 BALANCE          0
 SURROUND:OFF
```

4 Press Δ + or ∇ – to move the cursor (▶) to SURROUND, and press ENTER.

5 Press Δ + or ∇ – to select ON, and press ENTER.

If the sound is distorted or noisy when receiving programs through the antenna terminal

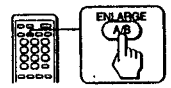
Change the TV system setting as follows until the sound becomes clear.

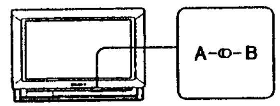
1. **Press MENU.**
2. **Press Δ + or ∇ – to move the cursor (▶) to PRESET, and press ENTER.**
3. **Press Δ + or ∇ – to move the cursor (▶) to MANUAL PROGR, and press ENTER.**
4. **Press Δ + or ∇ – to move the cursor (▶) to TV SYS, and press ENTER.**
5. **Press Δ + or ∇ – to change the TV system until the sound becomes clear.**

Selecting a stereo or bilingual program

You can enjoy stereo sound or bilingual program of NICAM and A2 (German) stereo systems. The initial setting is stereo sound.

Press A/B/ENLARGE repeatedly until you receive the sound you want.
The sound changes and the corresponding indicator lights up as follows:





When receiving a NICAM program:

Broadcasting	On-screen Display	Selected sound (Indicator lit)
NICAM stereo	NICAM	→ Stereo → Regular (A and B)
NICAM bilingual	NICAM	→ A → B → Regular (A) (B)
NICAM monaural	NICAM	→ NICAM monaural (A) → Regular

When receiving an A2 (German) stereo program:

Broadcasting	On-screen display	Selected sound (Indicator lit)
A2 (German) stereo	STEREO	→ Stereo → Monaural (A and B)
A2 (German) bilingual	—	→ A → B (A) (B)

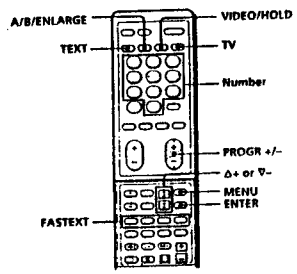
Receiving area for NICAM and A2 (German) stereo programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, etc.
A2 (German) stereo	Australia, Malaysia, Thailand, etc.

Notes
- If the signal is very weak, the sound becomes monaural.
- If the stereo sound is noisy, select "regular" or "mono." The sound becomes monaural, however, the noise will be reduced.

Viewing Teletext

TV stations broadcast an information service called Teletext via a local TV channel.
Teletext service allows you to receive various information such as weather forecasts or news at any time. Some of the features, however, may not be available depending on the Teletext service.



Displaying Teletext

1 Select a TV channel which carries the Teletext broadcast you want to watch.

2 Press TEXT to display the Teletext.
A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, P100 appears in the top left corner of the screen.

To switch Teletext off, press TV.

Superimposing a Teletext page on the TV picture

Press TEXT.
Each time you press TEXT, the screen changes as follows:

→ Teletext → Teletext and TV → TV →

Checking the contents of a Teletext service (INDEX)

When Teletext is switched on, you can display the Teletext menu.

1 Press MENU.

```
▶INDEX
 TEXT CLEAR
 SUBTITLES
 REVEAL      :OFF
 TIME PAGE
 SUBPAGE
```

2 Press Δ + or ∇ – to move the cursor (▶) to INDEX, and press ENTER.

Selecting a Teletext page

Press the number buttons to enter the three-digit page number of the Teletext number you want.
If you make a mistake, re-enter the correct page number.

To access the next or previous page, press PROGR +/–.

Preventing a Teletext page from being updated (HOLD)

A Teletext page may consist of several subpages. You can stop the page scrolling in order to read the text at your own pace.

Press VIDEO/HOLD.
HOLD appears in the top left corner of the screen.

To resume normal Teletext operation, press TEXT.

Using FASTEXT

This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT page is broadcast, a color-coded menu appears at the bottom of the screen. The colors of the menu correspond to the red (TV/VIDEO), green (FREEZE), yellow (SWAP) and blue (PIP) buttons on the remote commander. These colored buttons function as the FASTEXT buttons in Teletext mode.

Press the colored button which corresponds to the color-coded menu.
The page is displayed after a few seconds.

Enlarging the Teletext display (ENLARGE)

Each time you press A/B/ENLARGE, the Teletext display changes as follows:

→Enlarge upper half→Enlarge lower half→Normal size→

Revealing concealed information (REVEAL)

Sometimes pages contain concealed information, such as answers to a quiz. The reveal option discloses the information.

1 Press MENU.

2 Press Δ + or ∇ – to move the cursor (▶) to REVEAL, and press ENTER.

3 Press Δ + or ∇ – to select ON, and press ENTER.

To conceal the information again, select OFF.

Watching a TV program while waiting for a requested Teletext page (TEXT CLEAR)

1 Select the Teletext page to which you want to refer.

2 Press MENU.

3 Press Δ + or ∇ – to move the cursor (▶) to TEXT CLEAR, and press ENTER.

4 When the page number is displayed on the screen, press TEXT to switch the Teletext on.

To restore the normal Teletext reception, press TEXT.

Displaying subtitles (SUBTITLES)

Your Teletext service informs you if a TV program is subtitled.

1 Press MENU.

2 Press Δ + or ∇ – to move the cursor (▶) to SUBTITLES, and press ENTER.

Note
- If the subtitles are not broadcast on page 888, select the subtitle page using the number buttons.

Displaying a Teletext page at the requested time (TIME PAGE)

You can display a time-coded page (e.g. an alarm page) at the time you preset.

1 Press MENU.

2 Press Δ + or ∇ – to move the cursor (▶) to TIME PAGE, and press ENTER.

3 Press the number buttons to enter four digits for the desired time. For example, to enter 7:30, press 0,7,3 and 0.

```
TXXXX
```

At the requested time, the page appears on the screen.

To restore the normal Teletext reception, press TEXT.

Displaying a particular page among several subpages (SUBPAGE)

1 Press MENU.

2 Press Δ + or ∇ – to move the cursor (▶) to SUBPAGE, and press ENTER.

3 Press the number buttons or PROGR +/– to enter four digits for the desired subpage. For example, to display the second page of a sequence, press 0, 0, 0 and 2.

```
SXXXX
```

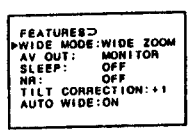
Customizing the TV

Using the AV OUT (advance rec-out) terminal

You can select the output signal from the MON/TV OUT jacks at the rear of the TV.
The S Video output can be used only when MONITOR is selected. However, it cannot be used in Program Index or Strobe mode even though MONITOR is selected.

1 Press MENU.

2 Press Δ + or ∇ – to select FEATURES, and press ENTER.



3 Press Δ + or ∇ – to select AV OUT, and press ENTER.

4 Press Δ + or ∇ – to select the output signal, and press ENTER.

Select	To
TV	Output the TV signal.
MONITOR	Output the signal of the picture you are watching as a monitor.

Selecting a TV program output from MON/TV OUT jacks while using the PIP feature

- For the KV-W28, when watching a TV program in the main screen, use PROGR +/–. When watching a video input in the main screen and a TV program in the PIP screen, use PIP PROGR +/– on the remote commander.
  For the KV-W32, use PROGR +/–.

Note

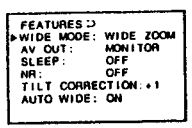
- Do not change the channel while recording with a VCR through the MON/TV OUT jacks. If you change the channel, it also changes the channel you are recording.

Adjusting the tilt of the picture

You can adjust the tilt of the picture if it is not aligned to the TV screen. This may happen due to the direction of the earth's magnetic fields in relation to the position of the TV.

1 Press MENU.

2 Press Δ + or ∇ – to select FEATURES, and press ENTER.



3 Press Δ + or ∇ – to select TILT CORRECTION, and press ENTER.

4 Press Δ + or ∇ – to select the most suitable value to align the picture position, and press ENTER.

TILT CORRECTION:

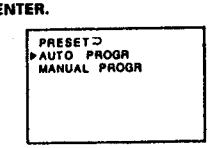
–5 – –4 – –3 – –2 – –1 – 0 – +1 – +2 – +3 – +4 – +5
press ∇ – press Δ +

Presetting channels manually

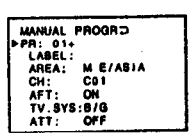
To change the program position for a channel or to receive a channel with a weak signal, preset the channel manually.
For example, preset a channel in program position 8.

1 Press MENU.

2 Press Δ + or ∇ – to move the cursor (▶) to PRESET, and press ENTER.



3 Press Δ + or ∇ – to select MANUAL PROGR, and press ENTER.



4 Select the program position to which you want to preset a channel.
(1) Press Δ + or ∇ – to select PR, and press ENTER.
(2) Press Δ + or ∇ – to select 8.
You can also select the program position with PROGR +/– or the number buttons (e.g. for program 24, press -/--, 2 and 4).
(3) Press ENTER.

5 Select your area (channel system).
For the areas allocated in each channel system, see "Channel allocation" on page 24.
(1) Press Δ + or ∇ – to select AREA, and press ENTER.
(2) Press Δ + or ∇ – to select your area, and press ENTER.

6 Select a channel which you want to preset.
(1) Press Δ + or ∇ – to select CH, and press ENTER.
(2) Press Δ + or ∇ – until the channel you want appears on the screen.
You can also select the channel directly using the number buttons. Press C (once for VHF/UHF channels, twice for cable TV channels), then the number buttons (e.g., for channel 5, press 0 and 5).
(3) Press ENTER.

To preset other channels
Repeat steps 4 to 6.

Disabling program positions

By disabling unused or unwanted program positions, you can skip those positions when you press PROGR +/–.
For example, disable program position 8.

1 Display the MANUAL PROGR menu. (Follow steps 1 to 3 in "Presetting channels manually" on page 19.)

2 Press Δ + or ∇ – to move the cursor (▶) to PR, and press ENTER.

3 Press PROGR + or – until 8 appears.

4 Press Δ + or ∇ – to select "–", and press ENTER.
To skip other program positions, repeat steps 3 and 4.

To restore the skipped program positions
In step 4 above, press Δ + or ∇ – to select "+," and press ENTER.

Customizing channel names

You can caption each channel number using up to five letters to be displayed on the screen.

1 Display the MANUAL PROGR menu. (Follow steps 1 to 3 in "Presetting channels manually" on page 19.)

2 Press Δ + or ∇ – to move the cursor (▶) to PR, and press ENTER.

3 Press Δ + or ∇ – to select the program position you want to caption and press ENTER.

4 Press Δ + or ∇ – to move the cursor (▶) to LABEL, and press ENTER.

5 Press Δ + or ∇ – to select a letter or number, and press ENTER for each caption space (up to five.)
Each time you press Δ + or ∇ –, the letter (number) changes as shown below.
A→B→...→Z→0→1→...→9→ – →:→/→. → +→_ (space)
For the caption space you want to leave blank, select "_."

6 Repeat steps 2 to 5 to caption other channels.

To erase a caption
In step 5 above, select "_ (space)."

Manual fine-tuning

Normally, the automatic fine-tuning (AFT) is operating. However, if the picture of a channel is distorted, you can use the manual fine-tuning function for the channel to obtain better picture reception.

1 Display the MANUAL PROGR menu. (Follow steps 1 to 3 in "Presetting channels manually" on page 19.)

2 Press Δ + or ∇ – to move the cursor (▶) to PR, and press ENTER.

3 Press Δ + or ∇ – to select the program position corresponding to the channel which you want to manually fine-tune, and press ENTER.

4 **Press Δ + or ∇ – to move the cursor (▶) to AFT, and press ENTER.**

5 **Press Δ + or ∇ – to select OFF, and press ENTER.**

6 **Press Δ + or ∇ – to fine-tune the channel so that you get the best TV reception.**
As you press these buttons, the frequency changes from –128 to +128.

7 **After fine-tuning, press ENTER.**
The fine-tuned level is stored.

Improving TV signal

If the reception signal is very strong, you can attenuate it to obtain better picture reception.

1 **Display the MANUAL PROGR menu. (Follow steps 1 to 3 in "Presetting channels manually" on page 19.)**

2 **Press Δ + or ∇ – to move the cursor (▶) to PR, and press ENTER.**

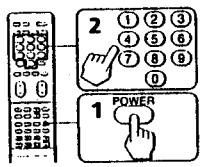
3 **Press Δ + or ∇ – to select the program position corresponding to the channel whose signal is very strong, and press ENTER.**

4 **Press Δ + or ∇ – to move the cursor (▶) to ATT, and press ENTER.**

5 **Press Δ + or ∇ – to select ON, and press ENTER.**

Setting the remote command mode

You can use the supplied remote commander to operate the TV and Sony video equipment, such as a VCR or multi-disc player. To operate Sony video equipment, first set the remote command mode for the video equipment you want to use.

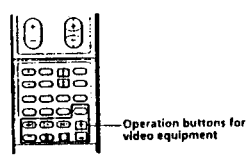


1 **Press and hold the POWER button in the VCR control area.**

2 **Press the number buttons that correspond to the remote command mode.**

Mode number buttons	Remote command mode
0 and then 1	VTR1 (e.g., Beta format VCR)
0 and then 2	VTR2 (e.g., 8 mm format VCR)
0 and then 3	VTR3 (e.g., VHS format VCR)
0 and then 4	MDP (multi-disc player)

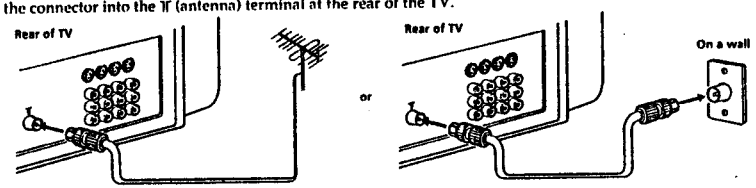
After setting the remote command mode, you can use the following buttons to operate the video equipment.



Connections

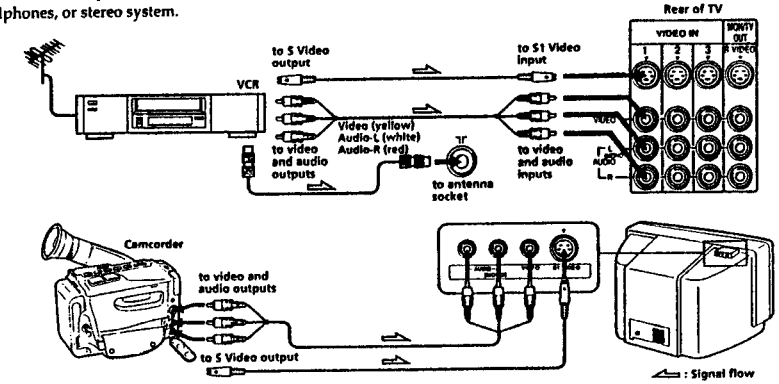
Connecting a VHF antenna or a combination VHF/UHF antenna—75-ohm coaxial cable (round)

Attach an optional IEC antenna connector to the 75-ohm coaxial cable.
Plug the connector into the Ψ (antenna) terminal at the rear of the TV.



Connecting optional equipment

You can connect optional audio/video equipment to this TV such as a VCR, multi-disc player, camcorder, headphones, or stereo system.



When connecting a monaural VCR
Connect the yellow plug to VIDEO and the white plug to AUDIO-L (mono).

Note on the S1 Video signal
When the S1 Video signal is input through the VIDEO IN 1/2/3 jack, set AUTO WIDE to OFF if you do not want to display the picture in full wide mode (see page 11).

If both S Video and video signals are input
The S Video input signal is selected. To view a video signal, disconnect the S Video connection.

Note on the video input
When no signal is input, the screen becomes blue.

When connecting a VCR to the VIDEO IN 3 jacks
This TV is equipped with two sets of the VIDEO IN 3 jacks. Two sets are not available to be used at the same time. When using equipment connected, turn off other equipment not in use.

Troubleshooting

If you have any problems, read this manual again and check the countermeasure for each of the symptoms listed below.
If the problem persists, contact your nearest authorized service center or dealer.

Snowy picture
Noisy sound


➡Check the antenna.
➡Check the antenna connection on the TV and on the wall.

Dotted lines or stripes

➡This may be caused by local interference (e.g. cars, neon signs, hair dryers, etc.) Adjust the antenna for minimum interference.

Double images or "ghosts"

➡This may be caused by reflections from nearby mountains or buildings. A highly directional antenna may improve the picture.

Good picture
Noisy sound


➡Check the TV SYSTEM setting.

No picture
No sound


➡Press POWER.
➡Press POWER to turn the TV off for 5 to 6 seconds, then turn it on again by pressing POWER.
➡Check the antenna connection.
➡Check the VCR connections.

Good picture
No sound


➡Press VOL +.
➡Press MUTING.

No color

➡Adjust COLOR in the VIDEO CONTROL menu's ADJUSTMENT option.
➡Check the COLOR SYSTEM setting.

TV cabinet creaks

➡Even if the picture or the sound is normal, changes in the room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.

Channel allocation

Areas allocated in each channel system

M E/ASIA/CATV W EURO
Afghanistan, Albania, Algeria, Austria, Bahrain, Bangladesh, Belgium, Brunei, Canary Islands, Cyprus, Denmark, Egypt, Finland, Germany, Ghana, Gibraltar, Greece, Iceland, India, Indonesia, Iran, Iraq, Italy, Jordan, Kenya, Republic of Korea, Kuwait, Lebanon, Liberia, Libya, Luxemburg, Malaysia, Malta, Mauritania, Mauritius, Maldives Rep., Morocco, Mozambique, Nepal, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Oman, Pakistan, Portugal, Qatar, Sarawak, Saudi Arabia, Seychelles, Sierra Leone, Singapore, Spain, Srilanka, Sudan, Swaziland, Sweden, Switzerland, Syrian Arab Rep., Tanzania, Thailand, Tunisia, Turkey, Uganda, United Arab Emirates, Western Sahara, Yemen Arab Republic, People's Dem. Rep. of Yemen, Yugoslavia, Zambia, Zimbabwe

AUSTRALIA
Australia, New Zealand

HK/UK
Hong kong, Ireland, Lesotho, South Africa, United Kingdom

CHINA/E EURO
Benin, Bulgaria, China, Congo, Czechoslovakia, Djibouti Republic, Gabon, Guadeloupe, Guiana, Guinea (P.P.R.), Hungary, Ivory Coast, Dem. People's Rep. of Korea, Madagascar, Mongolia, New Caledonia, Niger, Poland, Reunion, Rumania, Senegal, Tahiti, Togo, Former U.S.S.R., Vietnam, Zaire

AMERICA/CATV AMERICA
Bahama Islands, Barbados, Belize, Bermuda, Bolivia, Burma (UHF), Canada, Chile, Colombia, Costa Rica, Cuba, Dominica Republic, Ecuador, El Salvador, Guam, Guatemala, Haiti, Hawaii, Honduras, Jamaica, Laos, Mexico, Panama, Peru, Philippines, Puerto Rico, Surinam, Taiwan, Trinidad & Tobago, U.S.A., U.S.A. (CATV), Venezuela

JAPAN
Burma (Myanmar) (VHF), Japan (VHF, UHF)

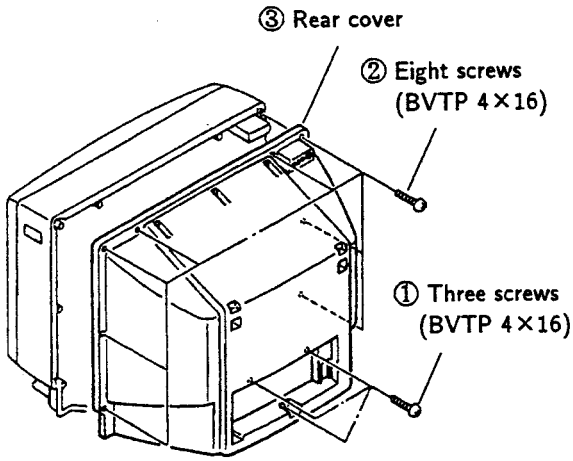
TV and color systems of each channel system

The TV system and color system are automatically set according to the channel system.

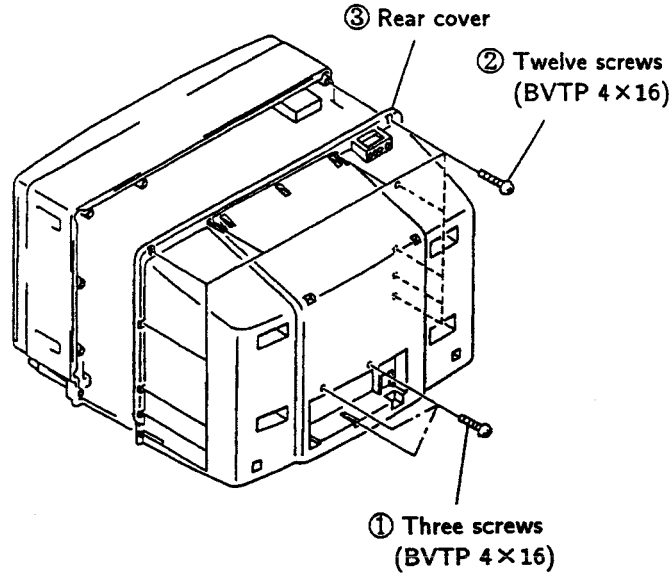
Channel system	TV system	Color system
M E/ASIA/ CATV W EURO	B/G, H: West European TV standard	AUTO
AUSTRALIA	B/G, H: Australian TV standard	AUTO
HK/UK	I: British TV standard	AUTO
CHINA/E EURO	D/K: East European TV standard	AUTO
AMERICA/CATV AMERICA	M: American TV standard	AUTO
JAPAN	M: Japan TV standard	AUTO

SECTION 2
DISASSEMBLY

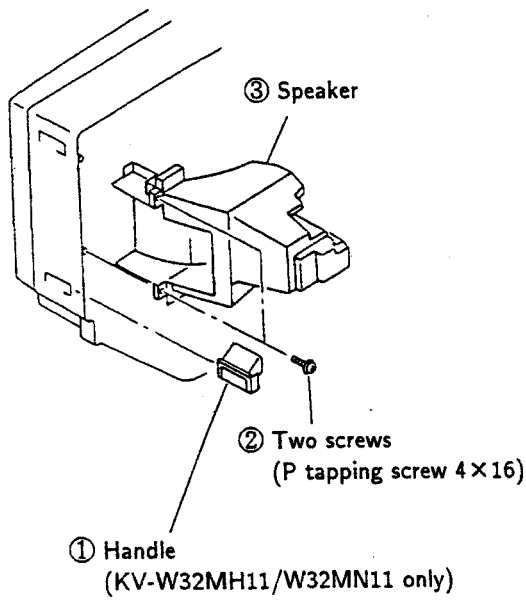
2-1-1. REAR COVER REMOVAL (KV-W28MH11/W28MN11 only)



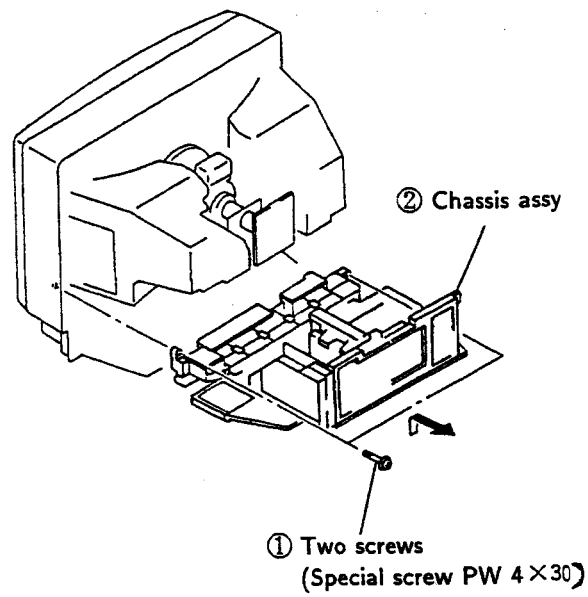
2-1-2. REAR COVER REMOVAL (KV-W32MH11/W32MN11 only)



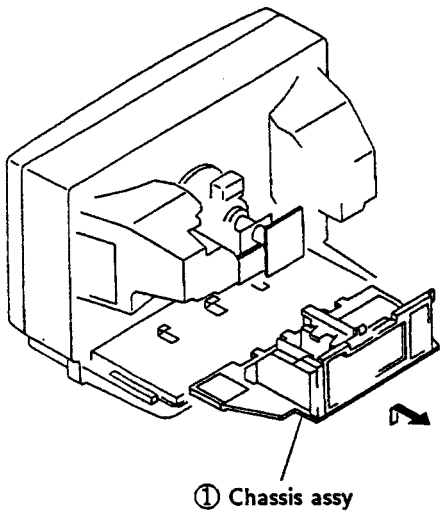
2-2. SPEAKER REMOVAL



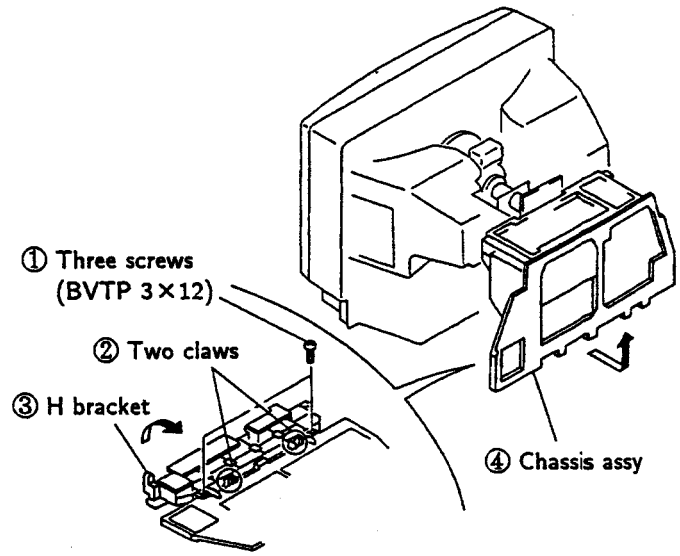
2-3-1. CHASSIS ASSY REMOVAL (KV-W28MH11/W28MN11 only)



2-3-2. CHASSIS ASSY REMOVAL (KV-W32MH11/W32MN11 only)

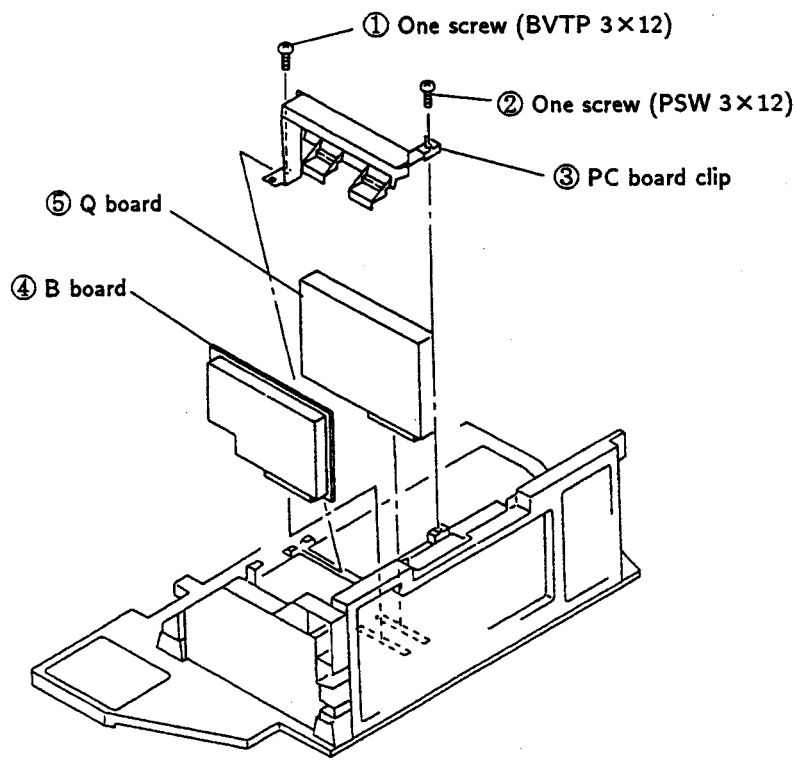


2-4. SERVICE POSITION

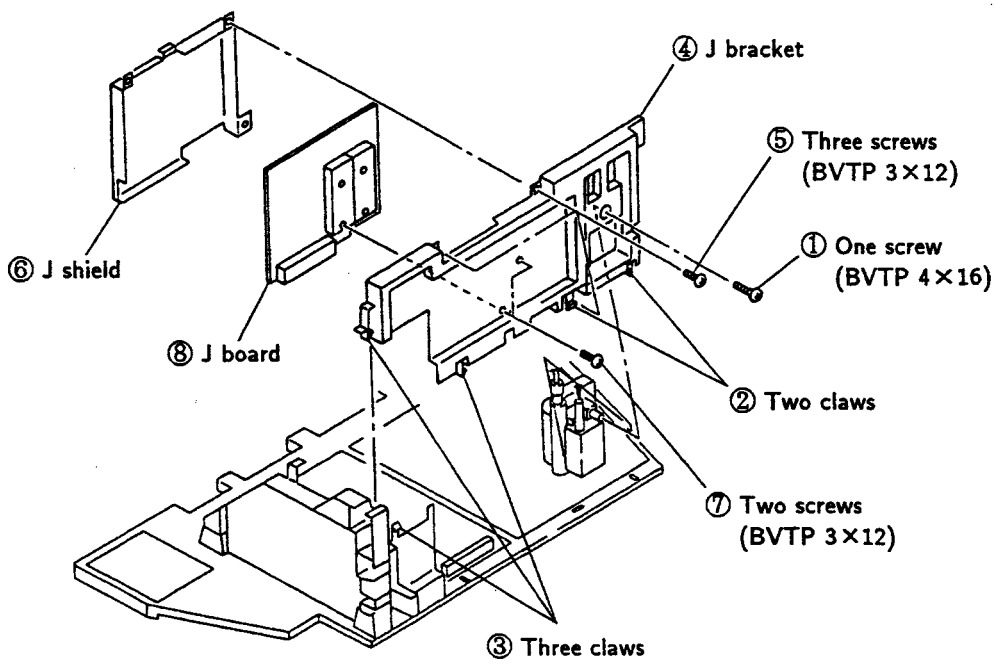


(KV-W28MH11/W28MN11 only)

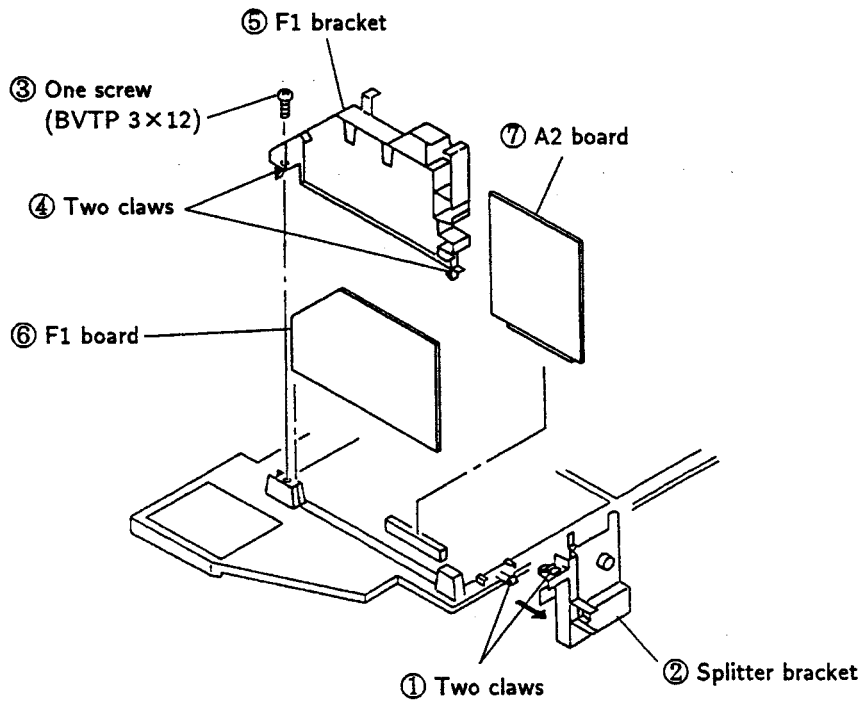
2-5. B AND Q BOARDS REMOVAL



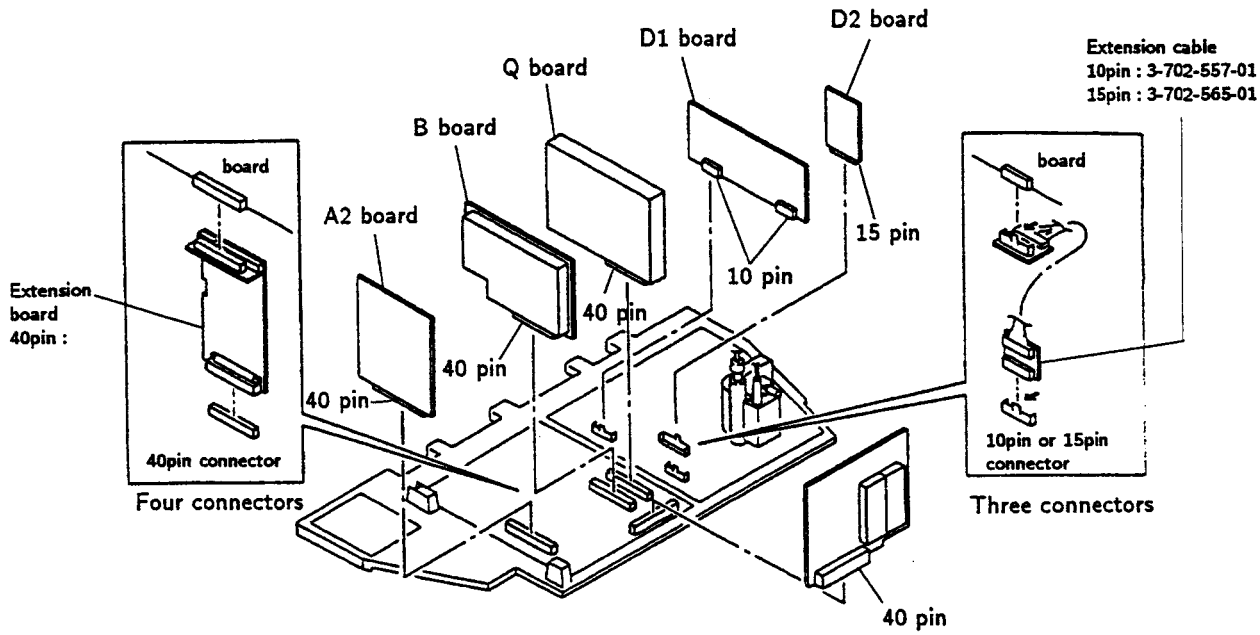
2-6. J BOARD REMOVAL



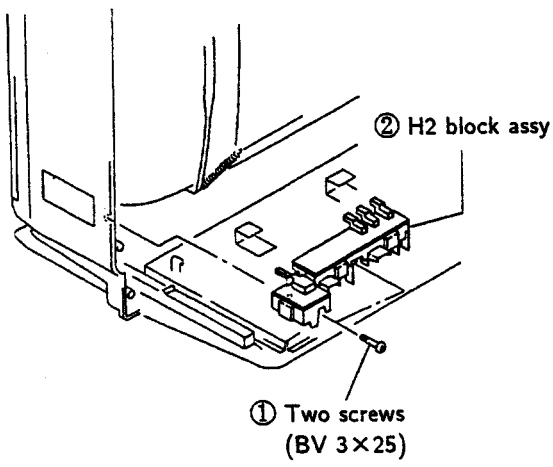
2-7. F1 AND A2 BOARDS REMOVAL



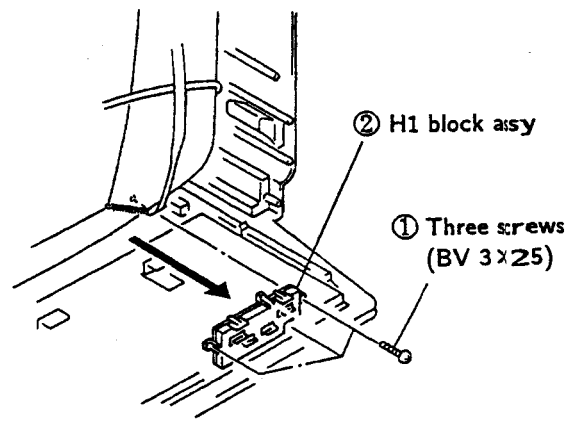
2-8. EXTENSION CABLE AND BOARD



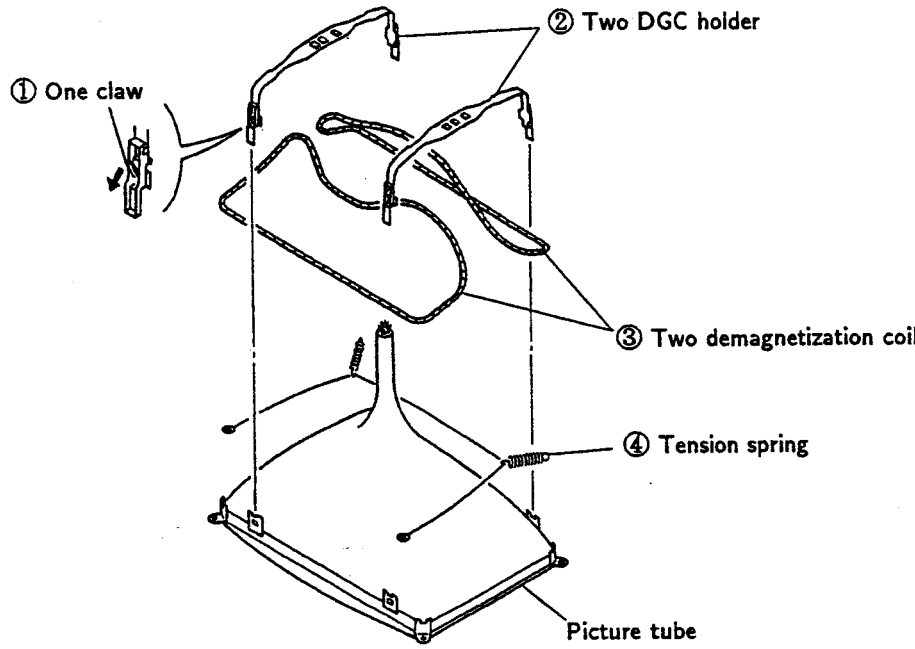
2-9. H2 BLOCK ASSY REMOVAL (KV-W32MH11/W32MN11 only)



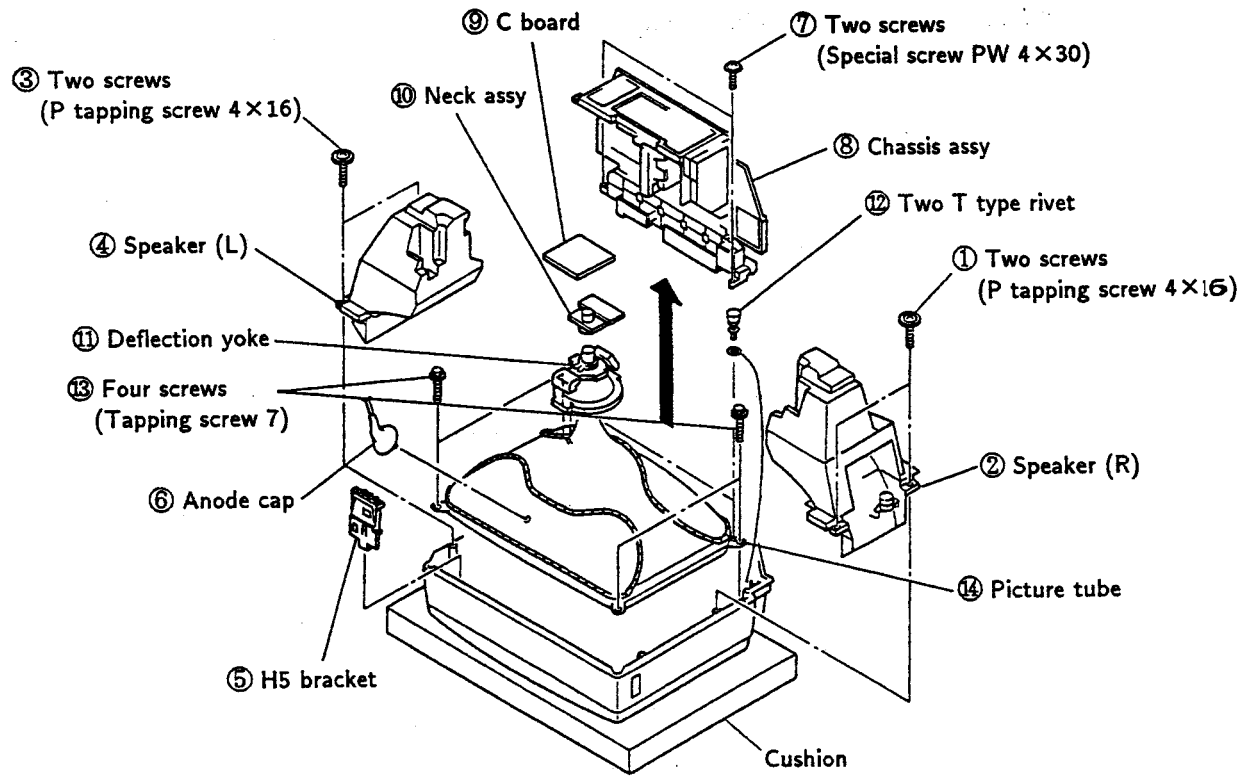
2-10. H1 BLOCK ASSY REMOVAL (KV-W32MH11/W32MN11 only)



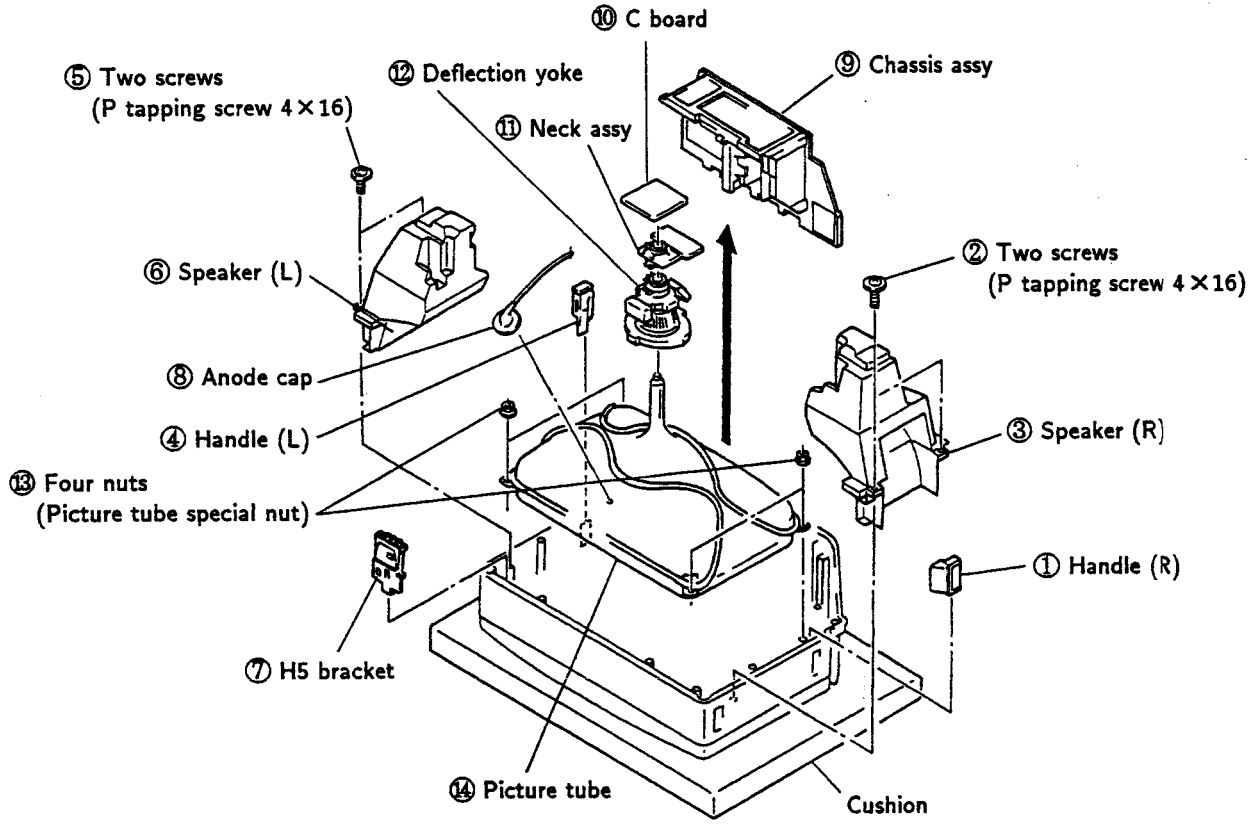
2-11. DEMAGNETIZATION COIL REMOVAL



2-12-1. PICTURE TUBE REMOVAL (KV-W28MH11/W28MN11 only)



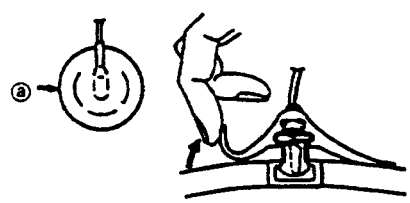
2-12-2. PICTURE TUBE REMOVAL (KV-W32MH11/W32MN11 only)



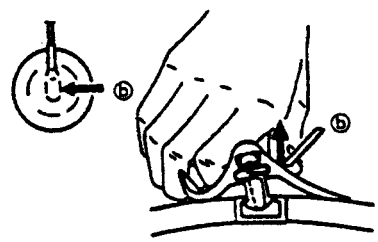
• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT chield or carbon painted on the CRT, after removing the anode.

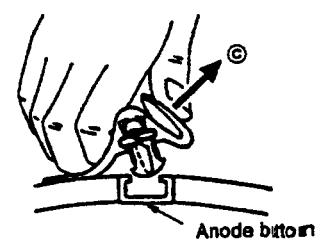
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



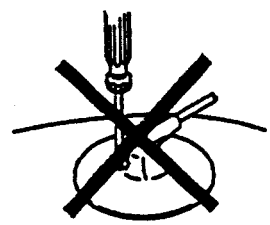
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

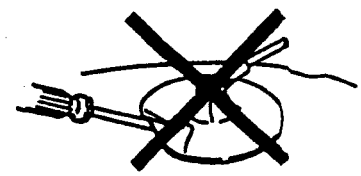
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber too hard in order not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hard!
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted:

PICTURE control ..... RESET
BRIGHTNESS control ..... CENTER

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

3-1. BEAM LANDING

Preparations:

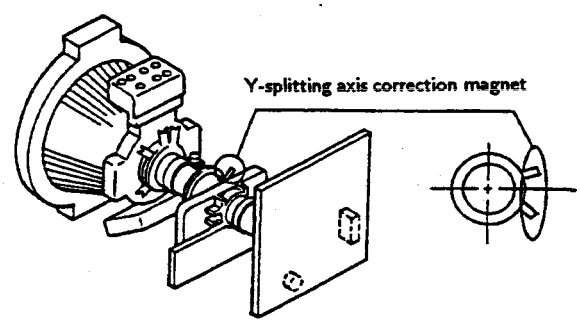
1. In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
2. Switch on the set's power and degauss with the degausser.

(1) Adjustment of Control Magnet for Y-Splitting Axis

1. Input a crosshatch signal with the pattern generator.
2. Picture control is minimum and brightness control is still normal.
3. Position the neck assy as shown in Fig.3-2.
4. Move the deflection yoke forward to touch the CRT and it stands up rightly.
5. Adjust the upper pin and the lower pin symmetrically by opening or closing the Y-splitting axis correction magnet on the neck assy.
6. Return the deflection yoke to original position.

(2) Landing

1. Input a full-white signal with the pattern generator. Maximize the picture setting and adjust the brightness setting for easy viewing.
2. Rough-adjust the focus, horizontal convergence.
3. Loosen the deflection yoke screws, align the purity adjustment knob to the central position. (See Fig.3-1.)
4. Switch the full-white signal to a mono-green signal.
5. Move the deflection yoke backward and adjust with the purity magnet so that the green is at the center and it aligns symmetrically. (See Fig.3-3.)
6. Move the deflection yoke forward and adjust so that entire screen is green.
7. Switch the raster signal to red, then to blue and verify the landing condition.
8. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
9. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig.3-4.)



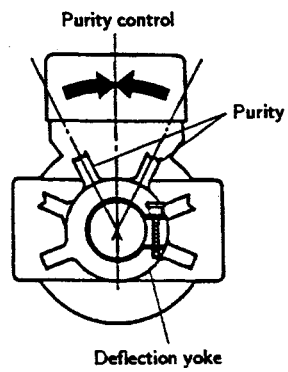


Fig.3-1.

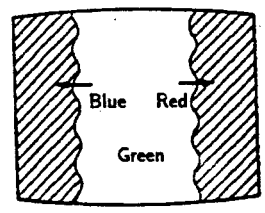


Fig.3-3.

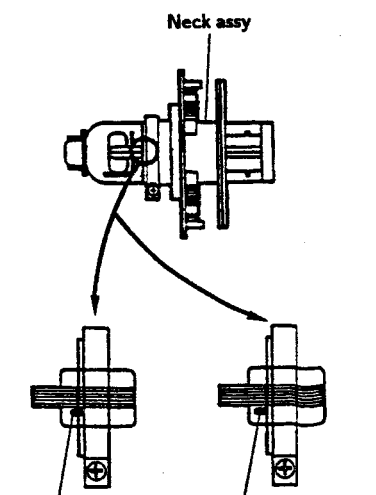


Fig.3-2.

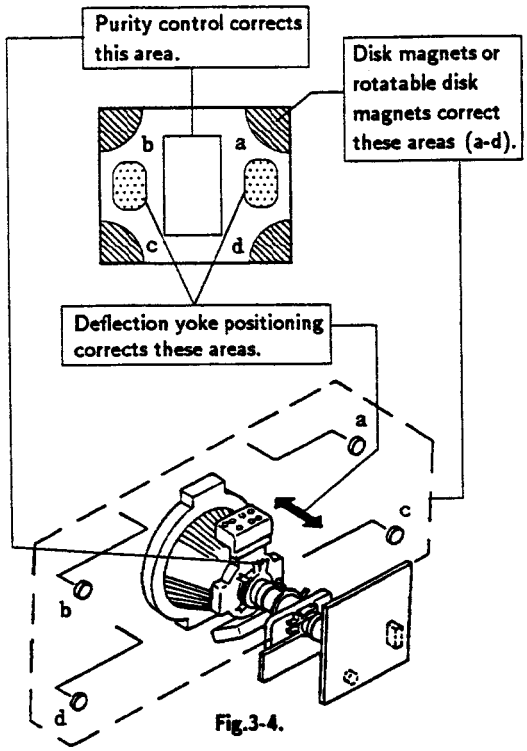


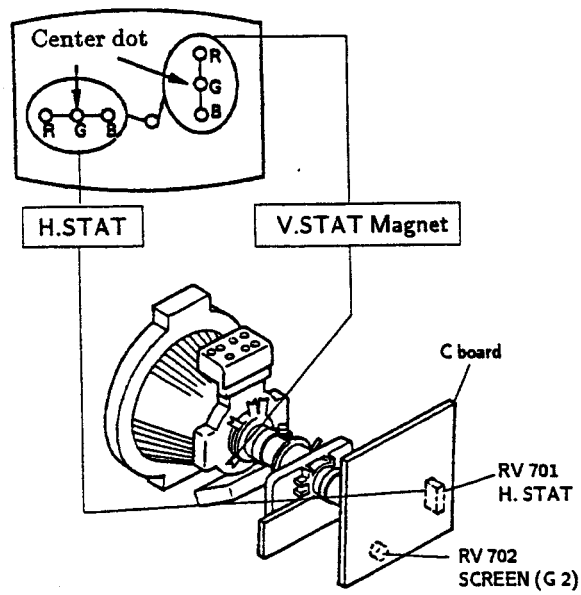
Fig.3-4.

3-2. CONVERGENCE

Preparation :

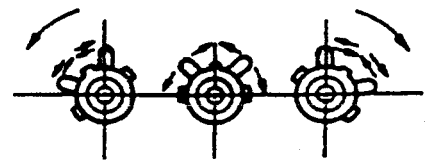
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and Vertical Static Convergence

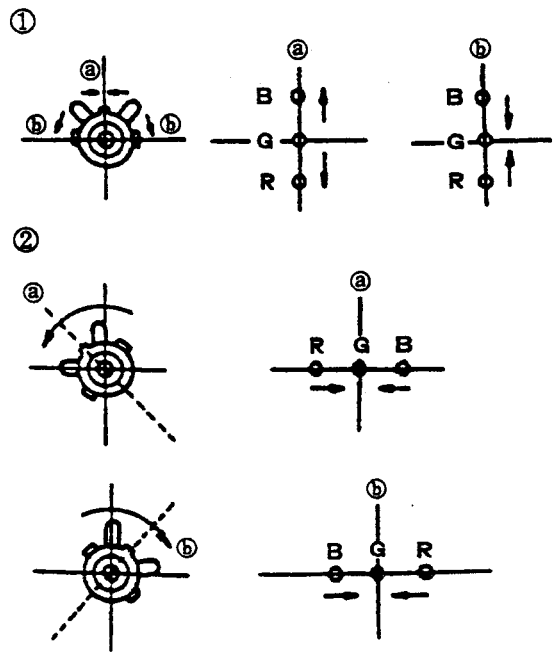


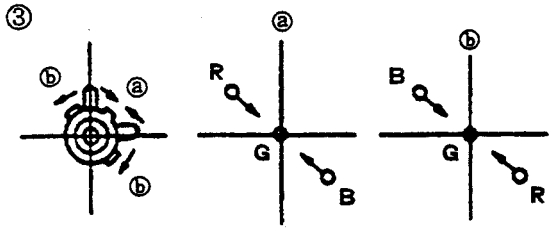
1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H. STAT variable resistor and the V.STAT magnet in the manner given below. (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

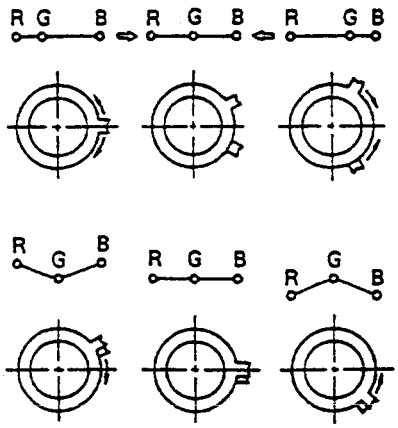


4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.



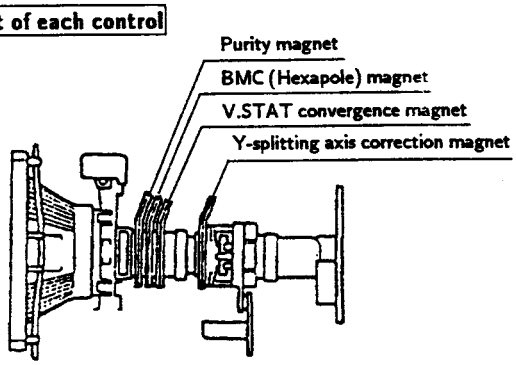


- Operation of BMC (Hexapole) Magnet



- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
  Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).

Layout of each control

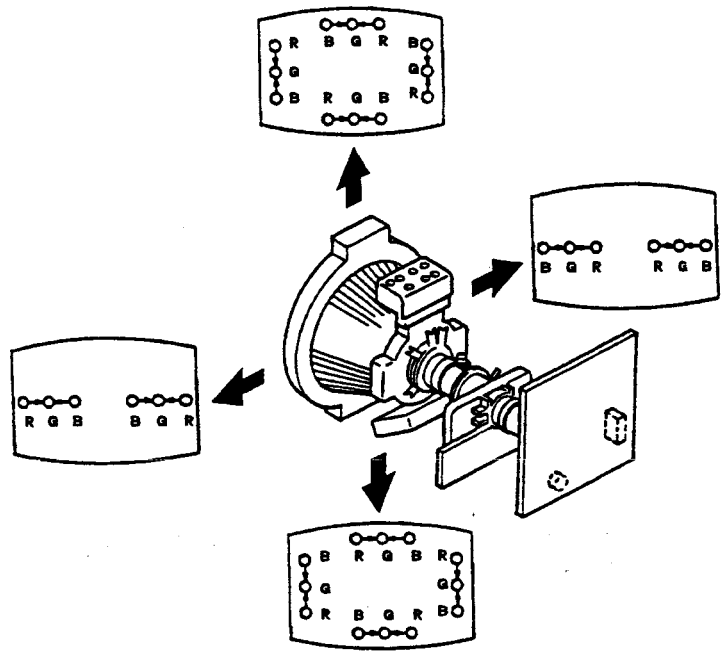


(2) Dynamic Convergence Adjustment

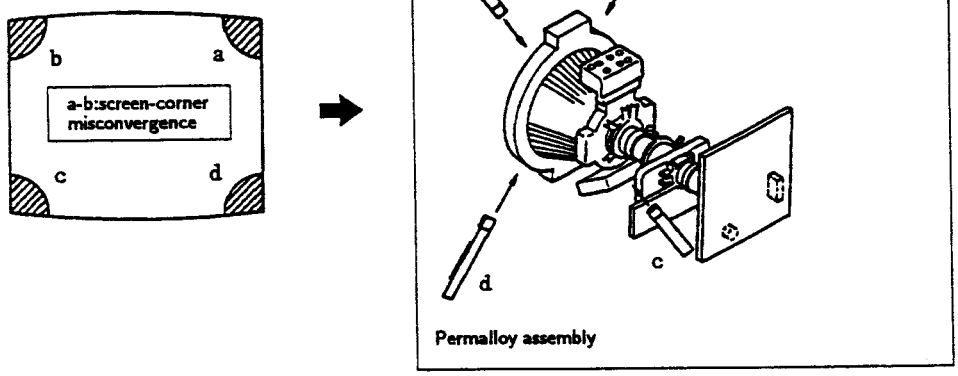
Preparations :

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.

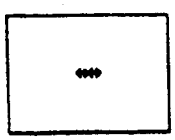


(3) Screen-corner Convergence

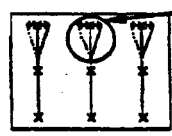


Item number	Adj. Item	Data range	Standard DATA	Note	Device
			W5 W6 Z5 Z6 S5 S6 No/Fu5 No/Fu6 MP		
37	DCS	00~3F	1F	DC Shift	(CXA 1526 P)
38	HAP	00~3F	1F	H. Amp	(CXA 1526 P)
39	HTL	00~3F	1F	H. Tilt	(CXA 1526 P)
3A	UYB	00~3F	1F	Upper Y Bow	(CXA 1526 P)
3B	LYB	00~3F	1F	Lower Y Bow	(CXA 1526 P)
3C	UCB	00~3F	1F	Upper Corner Bow	(CXA 1526 P)
3D	UTL	00~3F	1F	Upper Tilt	(CXA 1526 P)
3E	LCB	00~3F	1F	Lower Corner Bow	(CXA 1526 P)
3F	LTL	00~3F	1F	Lower Tilt	(CXA 1526 P)

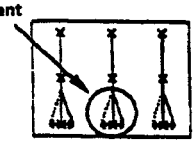
R.G.B.dots movement on the screen of the set



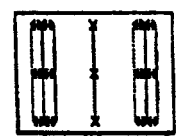
DC SHIFT
Fine adjustment of H.stat



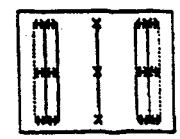
UPPER Y BOW
Adjustment of Y.BOW of the upper section of the screen.



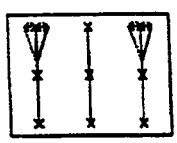
Standard LOWER Y BOW
Adjustment of Y.BOW of the lower section of the screen.



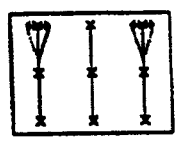
H.AMP
H.AMP adjustment



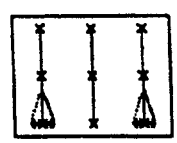
H.TILT
H.TILT adjustment



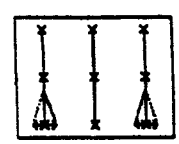
UPPER COR BOW
Adjustment of C.BOW of the upper section of the screen.



UPPER TILT
Adjustment of TILT of the upper section of the screen.



LOWER COR BOW
Adjustment of C.BOW of the lower section of the screen.



LOWER TILT
Adjustment of TILT of the lower section of the screen.

At this time, H.TILT, H.AMP, UPPER TILT, UPPER COR, BOW, LOWER TILT, and LOWER COR, BOW look like all the same, but the movement of the right and left dots are reverse in all the TILT system. (Pay attention to the dotted lines.)

(4)Dynamic convergence adjustment

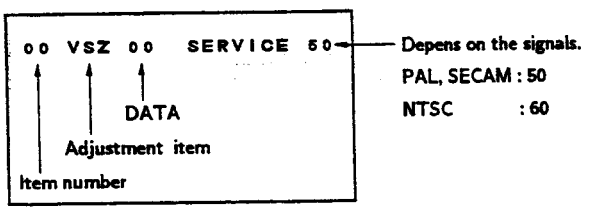
1. Adjust horizontal convergence located at the center position of the screen with H STAT VR.
2. Dynamic convergence adjustments are made with the RM-850 that comes with this unit.

Entering service mode

With the unit on standby
⇩
"DISPLAY"
⇩
"5"
⇩
"VOL (+)"
⇩
"POWER"

This operation sequence puts the unit into service mode.

The screen display

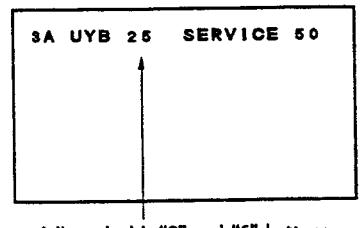


"1", "4"	Raise/lower the service item number
"3", "6"	Raise/lower the data
"MUTE"	Writes
"0"	Executes the writing

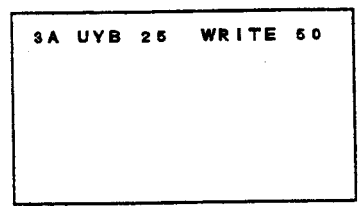
Item Number 3A

This explanation uses UYBOW as an example.

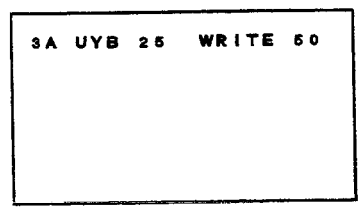
1. Select 3A UYBOW with the "1" and "4" buttons.
2. Raise/lower the data with the "3" and "6" buttons.
3. Select the optimum staste.
4. Write with the MUTE button. (The display changes to WRITE.)
5. Execute the writing with the "0" button.



Adjusted with "3" and "6" buttons



Written with "MUTE"

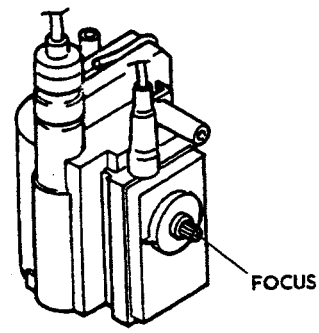


Write excuted with "0"

"1", "4"	Select the adjustment item.
↓	
"3", "6"	Raise/lower the data.
↓	
"MUTE"	Writes.
↓	
"0"	Executes the writing.

3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for a best focus.

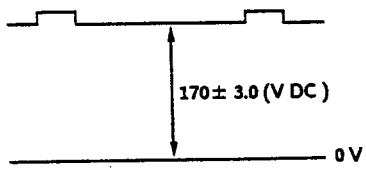


FLYBACK TRANSFORMER (T503)

3-4. G2 (SCREEN), SUB PICTURE AND WHITE BALANCE ADJUSTMENTS

(1) G2 (SCREEN) ADJUSTMENT (RV701)

1. Set the PICTURE and BRIGHTNESS to normal.
2. Put to VIDEO input mode without signals.
3. Set to Service Mode. (To turn off Blue Black.)
4. Change BOF data of the item number "1A" from "00" to "01".
5. Connect R, G, and B of the C board cathode to the oscilloscope.
   Adjust R-G, G-G, B-G, data of the item number "0 E ","0 F ", "10 " to the volue below.



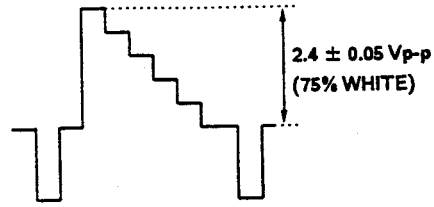
6. Adjust G2 (RV701) volume to make the screen slightly bright.

(2) SUB PICTURE ADJUSTMENT (R-G)

1. Receive a NTSC color-bar (75% WHITE) to set to FULL mode.
2. Set the conditions as follows.

SHARPNESS	·····	minimum
PICTURE	·····	maximum
COLOR	·····	minimum
BRIGHT	·····	50%
SUB BRIGHT	·····	1 F } DATA
SUB PICTURE	·····	18 } DATA

3. Connect an oscilloscope to the pin⑥ (R OUT) of CN 508, D board.
4. Set to Service Mode.
5. Select 0F (G-G) and 10 (B-G) with [1] and [4] of the commander and set the data "00" with [3] and [6].
6. Select 0E (R-G) with [1] and [4], and adjust [3] and [6] to get 2.4±0.05 Vp-p level.
7. Press [MUTING] → [0] of the commander to write the data.

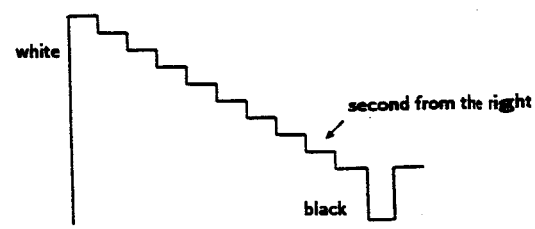


(3) WHITE BALANCE ADJUSTMENTS

1. Input an entire white signal.
2. Set to service mode.
3. Set the PICTURE to maximum.
4. Select G-G (0F) and B-G (10) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
5. Set the PICTURE to minimum.
6. Adjust the level with RV705 (B.BKG) and RV704 (G.BKG) for the best white balance.
7. Write into the memory by pressing [MUTE] → then [0].

(4) SUB BRIGHT ADJUSTMENT

1. Set to service mode.
2. Input a staircase signal of black and white from the pattern generator.
3. BRIGHTNESS ··· 50%
   PICTURE ····· minimum
4. Select SBT with [1] and [4], and adjust SBT (24) level with [3] and [6] so that the stripe second from the right is dimly lit.



SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ADJUSTMENTS WITH COMMANDER

Service adjustments are made with the RM-850 that comes with this unit.

Entering service mode

With the unit on standby

↓

"DISPLAY"

↓

"5"

↓

"VOL (+)"

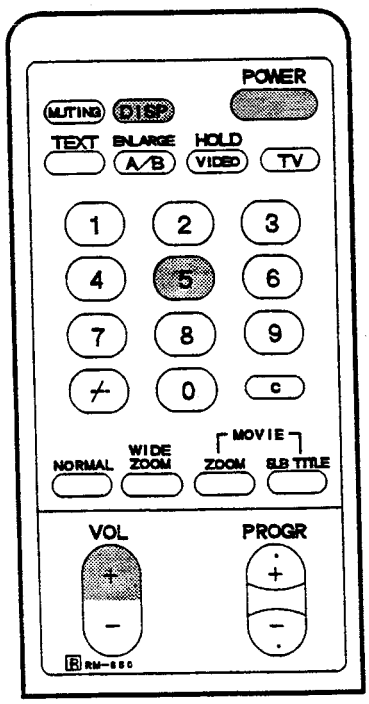
↓

"POWER"

This operation sequence puts the unit into servise mode.

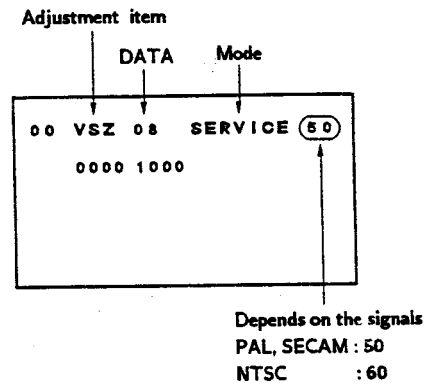
"1", "4"	Raise/lower the service item number
"3", "6"	Raise/lower the data
"MUTE"	Writes
"0"	Executes the writing

"7", "0"	The data all becomes the values in memory
"8", "0"	User control all goes to the standard state
"5", "0"	Service data initialization (Besure not to use usually.)
"DISP", "0"	Write 50Hz adjustment data to 60Hz, or vice versa.
"2", "0"	Data copy of all WIDE modes.



RM-850

The screen display is :



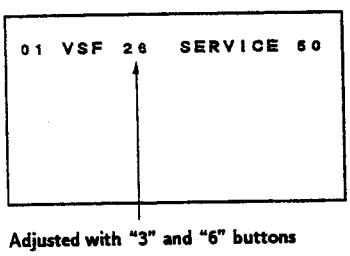
"1", "4"	Select the adjustment item.
↓	
"3", "6"	Raise/lower the data.
↓	
"MUTE"	Writes
↓	
"0"	Executes the writing.

4-2. ADJUSTMENT METHOD

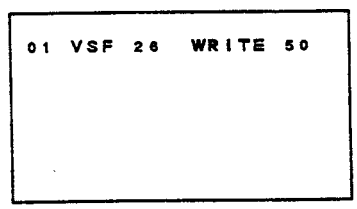
Item Number 01

This explanation uses V-SHFT as an example.

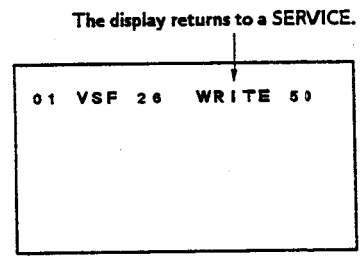
1. Select 01 V-SHFT with the "1" and "4" buttons.
2. Raise/lower the data with the "3" and "6" buttons.
3. Select the optimum state. (The standard setting is for PAL reception.)
4. Write with the MUTE button. (The display changes to WRITE.)
5. Execute the writing with the "0" button.



Adjusted with "3" and "6" buttons



Written with "MUTE"



Write excuted with "0"

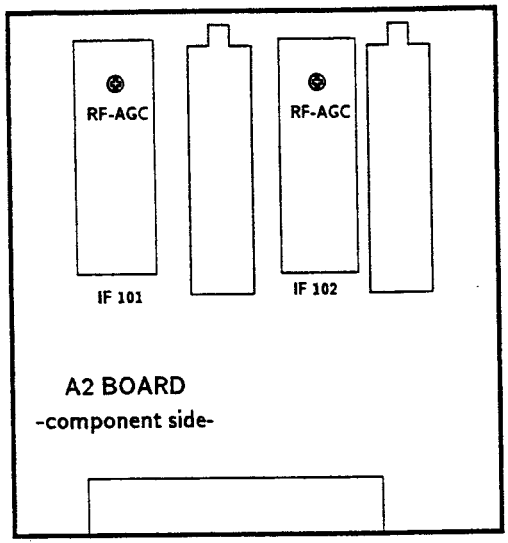
Item number	Adjustment Item	Data range	Standard DATA	Note	Device
			W5 W6 Z5 Z6 S5 S6 No/Fu5 No/Fu6 MP		
00	VSZ	00~3F	30	V-Size	CXD2018Q
01	VSF	00~3F	26	V-Shift	
02	SCR	00~0F	04	S-Correction	
03	VLN	00~0F	09	V-Linearity	
04	HSZ	00~3F	2A	H-Size	
05	PAP	00~3F	20	Pin-Amp	
06	TLT	00~1F	10	TILT	
07	UCP	00~0F	07	Upper Corner Pin	
08	LCP	00~0F	06	Lower Corner Pin	
09	VBW	00~0F	08	V-Bow	
0A	VAG	00~0F	08	V-Angle	
0B	HVV	00~07	05	HV-Comp-V	
0C	HVH	00~07	00	HV-Comp-H	
			W5 W6 Z5 Z6 S5 S6 N5 N6 F5 F6 MP		
0D	HSH	00~3F	20	H Shift	

Item number	Adjustment Item	Data range	Standard DATA	Note	Device
0E	R-G	00~3F	1F	Red Gain	TDA4780/ TDA4686
0F	G-G	00~3F	1F	Green Gain	
10	B-G	00~3F	1F	Blue Gain	
11	RLR	00~3F	1F	Red Level Ref.	
12	GLR	00~3F	1F	Green Level Ref.	
13	BLR	00~3F	1F	Blue Level Ref.	
14	PDL	00~3F	29	Peak Drive Limit	
15	GMM	00~3F	1F	γ	
16	SC5	00~01	01	Sand Castle 5 V	
17	DOF	00~01	00	Delay Lead Edge	
18	HD	00~01	00	HDTV/Progressive	
19	FLB	00~01	00	Screen Black	
1A	BOF	00~01	00	Auto Cut-OFF OFF	
1B	ADB	00~01	01	Adaptive Black	
1C	YH1	00~01	00	Y High Level	
1D	MD2	00~01	00	Modus 2	
1E	BLS	00~01	00	BLST	
1F	YEX	00~01	01	Y Exclusive Hue	
20	RLC	00~01	00	Rel. to CutOff	
21	TCP	00~01	01	Time Const. Peak	
			Wide Zoom, Zoom, Subtitle, Full, MP : Normal		
22	SPI	00~1F	0F	Sub Picture	
23	SCO	00~3F	1F	Sub Color	
24	SBT	00~7F	1F	Sub Bright	
25	SHU	00~1F	0F	Sub Hue	TDA9145
26	SHS	00~1F	0F	Sub Hue S&PinP	
27	CV	00~01	00	Forced CVBS	
28	FON	00~01	01	Frame ON	SDA9188-3X
29	DLY	00~07	00	Sel.Delay LL 3 P	
2A	P-V	00~0F	08	V read delay	
2B	PVS	00~07	01	PIP-V offset	
2C	P-H	00~3F	0A	H read delay	
2D	PHS	00~0F	02	PIP-H offset	
2E	CTR	00~0F	09	Contrast	
2F	DVI	00~1F	07	Set Delay VSI	
30	DVP	00~1F	0F	Delay VSP Pulse	
31	BRT	00~0F	05	Frame Brightness	
32	PLL	00~01	00	PLL Time Const.	
33	9V5	00~07	03	Multi PiP V 50 Hz	
34	9V6	00~07	03	Multi PiP V 60 Hz	
35	9H5	00~07	03	Multi PiP H 50 Hz	
36	9H6	00~07	03	Multi PiP H 60 Hz	
			W5 : W6 : Z5 : Z6 : S5 : S6 : No/Fu5 : No/Fu6 : MP		
37	DCS	00~3F	1F	DC Shift	CXA1526P
38	HAP	00~3F	1F	H.Amp	
39	HTL	00~3F	1F	H.Tilt	
3A	UYB	00~3F	1F	Upper Y bow	
3B	LYB	00~3F	1F	Lower Y Bow	
3C	UCB	00~3F	1F	Upper Corner Bow	
3D	UTL	00~3F	1F	Upper Tilt	
3E	LCB	00~3F	1F	Lower Corner Bow	
3F	LTL	00~3F	1F	Lower Tilt	

Item number	Adjustment Item	Data range	Standard DATA	Note	Device
			W5 W6 Z5 Z6 S5 S6 N5 N6 F5 F6		
40	107	00~01	00	Set TMS4C1070	IPQ V3, 4 (F/F)
41	P27	00~01	00	PLLMID Port $P2_7$	
42	LFR	00~01	01	LFR ON/OFF	
43	HWE	00~0F	0B	HWE1 Line Delay	
44	NR	00~03	01	Noise Reduction	
45	STP	00~01	00	Still Picture	
			W5 W6 Z5 Z6 S5 S6 No/Fu 5 No/Fu 6		
46	VWD	00~3F	Invalid 1A Invalid	Scroll	
47	Y-V	00~FF	00	Y Value	
48	UVV	00~FF	00	UV Value	
49	TXH	00~FF	05	Text H Position	TPU3040
4A	TXV	00~3F	16	Text V Position	
4B	VSP	00~FF	3B	WST Layer V Stop	(Text)
4C	BSP	00~FF	3D	Blanking Stop	
4D	BST	00~FF	35	Blanking Start	
4E	QSF	00~1F	01	ACQ Soft Slicer	
4F	A7F	00~FF	0A	Address 7FH Data	
50	QDT	00~3F	0D	ACQ Data Slicer	
51	CST	00~FF	00	Clamping Start	
52	CSP	00~FF	50	Clamping Stop	
53	FAW	00~FF	0A	NICAM FAW Thresh	MSP3410
54	CCT	00~FF	0A	NICAM Error Bit	
55	WLO	00~FF	0A	W.G.	(Audio, Stereo)
56	WHI	00~FF	15	W.G.Stereo cut point	
57	WML	00~FF	50	W.G. timer	
58	WMH	00~FF	EA	W.G.Bilin cut point	
59	ACG	00~01	01	AGC Auto/Const.	
5A	CDB	00~7F	50	AGC Gain Const.	
5B	FMP	00~7F	24	FM Mono Prescale	
5C	WGP	00~7F	3C	W.G. Prescale	
5D	NIP	00~7F	7F	NICAM Prescale	
5E	CRM	00~01	00	Carrier Mute	
5F	ACO	00~01	01	Audio Clock Out	
60	OSH	00~3F	06	OSD Position H	CXP85340A
61	ODL	00~FF	10	Power ON Delay	
62	BLU	00~01	01	Blue Back	
63	ROS	00~3F	3F	N/S User Step	
64	MUT	00~01	01	No Sync. Mute	
65	DID	00~01	00	disable Degauss	
66	DWZ	00~01	00	User Last Wide	
67	OP0	00~FF	6C	Option 0	
68	OP1	00~FF	01	Option 1	

Note :
- W5 : Wide Zoom 50Hz
- W6 : Wide Zoom 60Hz
- Z5 : Zoom 50Hz
- Z6 : Zoom 60Hz
- S5 : Subtitle50Hz
- S6 : Subtitle60Hz
- N5 : Normal 50Hz
- N6 : Normal 60Hz
- F5 : Full 50Hz
- F6 : Full 60Hz
- MP : Multi PinP

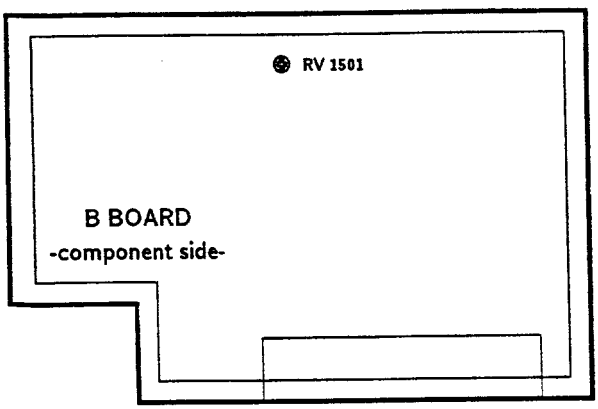
4-3. A2 BOARD ADJUSTMENT



AGC ADJUSTMENT (IF BLOCK)

1. Receive an off-air signal.
2. Adjust the AGC VR (IF101) so that there is no snow noise and cross-modulation.
3. Set to PIP mode. (only 32 inch)
4. Receive an off-air signal with the sub picture.
5. Adjust the AGC VR (IF102) so that there is no snow noise and cross-modulation.

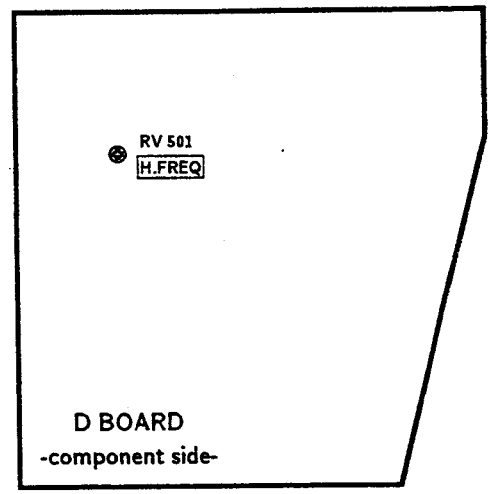
4-4. B BOARD ADJUSTMENT



SCP F0 ADJUSTMENT (RV1501)

1. Receive a PAL color-bar signal.
2. Connect an oscilloscope to the pin ⑧ of IC501.
3. Adjust RV1501 for 2.8~2.9 V.

4-5. D BOARD ADJUSTMENT



H. FREQ ADJUSTMENT (RV501)

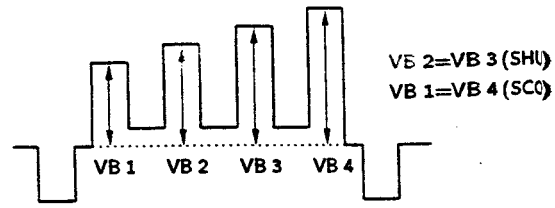
1. Receive a PAL color-bar signal.
2. Short the ground and pin ① of IC502.
3. Connect a frequency counter to the pin ⑫ of IC502.
4. Adjust RV501 for 31.4±0.1 kHz.
5. Disconnect a jumper wire from IC502.

SUB HUE, SUB COLOR ADJUSTMENT (SHU, SCO)

1. Receive a NTSC color-bar to set to FULL mode.
2. Set the conditions as follows.

PICTURE	·····	80%
COLOR	·····	50%
HUE	·····	50%

3. Connect an oscilloscope to the pin⑦ (B OUT) of CN508, D board.
4. Set to Service Mode.
5. Select 25 (SHU) and 23 (SCO) with [1] and [4], and adjust [3] and [6] to get VB2=VB3 and VB1=VB4.
6. Press [MUTING] → [0] of the commander to write the data.

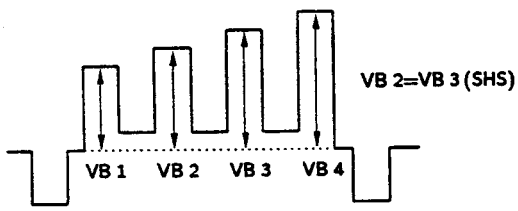


SUB HUE S ADJUSTMENT (SHS)

1. Receive a S video NTSC color-bar to set to FULL mode.
2. Set the conditions as follows.

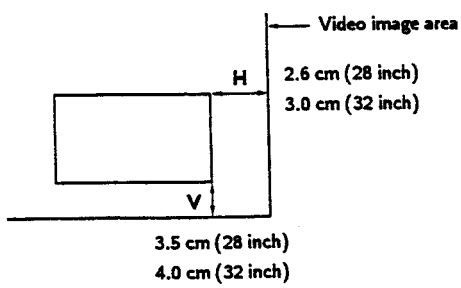
PICTURE	·····	80%
COLOR	·····	50%
HUE	·····	50%

3. Connect an oscilloscope to the pin⑦ (B OUT) of CN 508, D board.
4. Set to Service Mode.
5. Select 26 (SHS) with [1] and [4], and adjust [3] and [6] to make VB2=VB3.
6. Press [MUTING] → [0] of the commander to write the data.



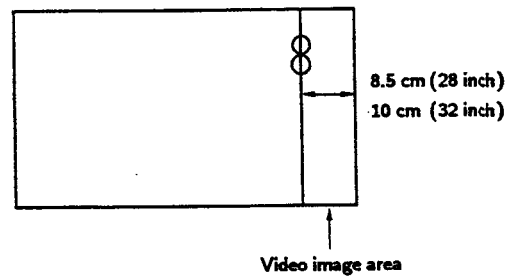
WINDOW PICTURE POSITION ADJUSTMENT (PVS, PHS)

1. Receive a PAL SP color-bar to set to FULL mode.
2. Set to Service Mode.
3. Press [MENU] button of the commander for P in P mode. (RIGHT, LOWER position)
4. Select 2A (P-V) or 2B (PVS) and 2C (P-H) or 2D (PHS) with [1] and [4].
   Then adjust them respectively, with [3] and [4], to 3.5 cm (28 inch) or 4.0 cm (32 inch), and 2.6 cm (28 inch) or 3.0 cm (32 inch).
5. Press [MUTING] → [0] of the commander to write the data.



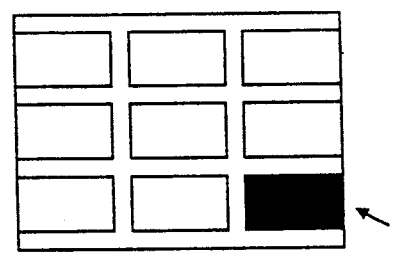
PROGRAM POSITION ADJUSTMENT (OSH)

1. Receive a PAL color-bar to set to FULL mode.
2. Set to Service Mode.
3. Press [DISP] button of the commander.
4. Select 60 (OSH) with [1] and [4] of the commander, and set the position as shown below with [3] and [6].
5. Press [MUTING] → [0] of the commander to write the data.



MULTI PIP ADJUSTMENT (9V5, 9V6, 9H5, 9H6)

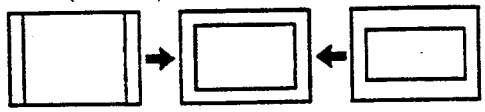
1. Receive a NTSC monoscope to set to FULL mode.
2. Set to Service Mode.
3. Press [MENU] button of the commander for STROBE mode. (RIGHT, LOWER position)
4. Select 34 (9V6) and 36 (9H6) with [1] and [4], and adjust [3] and [6] to set the monosco pattern at the frame center.
5. Press [MUTING] → [0] of the commander to write the data.
6. Receive a PAL monoscope to set to FULL mode.
7. Press [MENU] button of the commander for STROBE mode. (RIGHT, LOWER position)
8. Select 33 (9V5) and 35 (9H5) with [1] and [4], and adjust [3] and [6] to set the monosco pattern at the frame center.
9. Press [MUTING] → [0] of the commander to write the data.



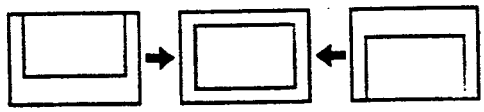
4-6. PICTURE DISTORTION ADJUSTMENT

Item Numbers 23-2D

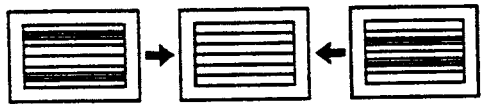
00 VSZ (V SIZE)



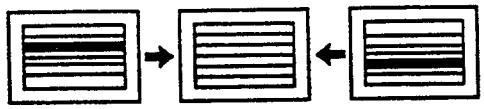
01 VSF (V SHIFT)



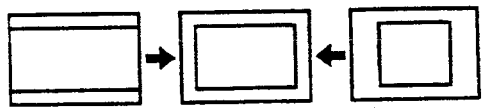
02 SCR (VERTICAL S correction)



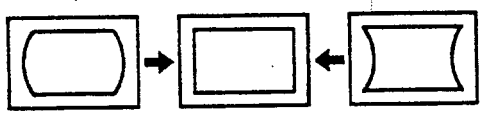
03 VLN (V LINEARITY)



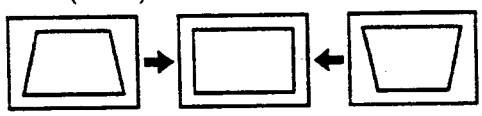
04 HSZ (H SIZE)



05 PAP (PIN AMP)

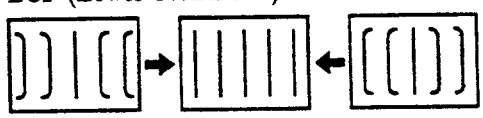


06 TLT (TILT)



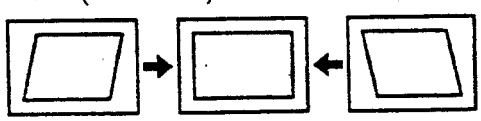
07 UCP (Upper Corner Pin)

08 LCP (Lower Corner Pin)



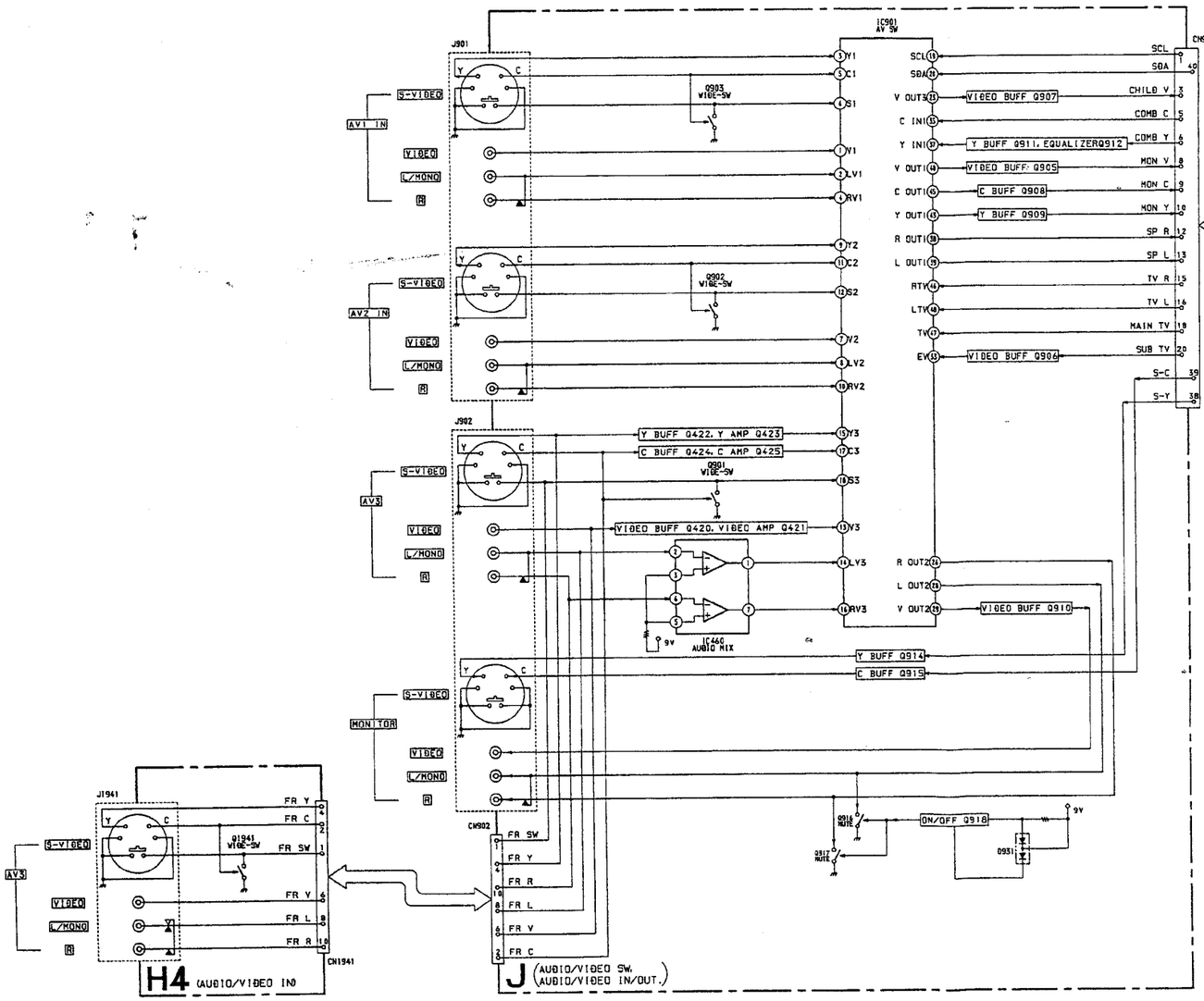
09 VBW (V-BOW)

0A VAG (V-ANGLE)



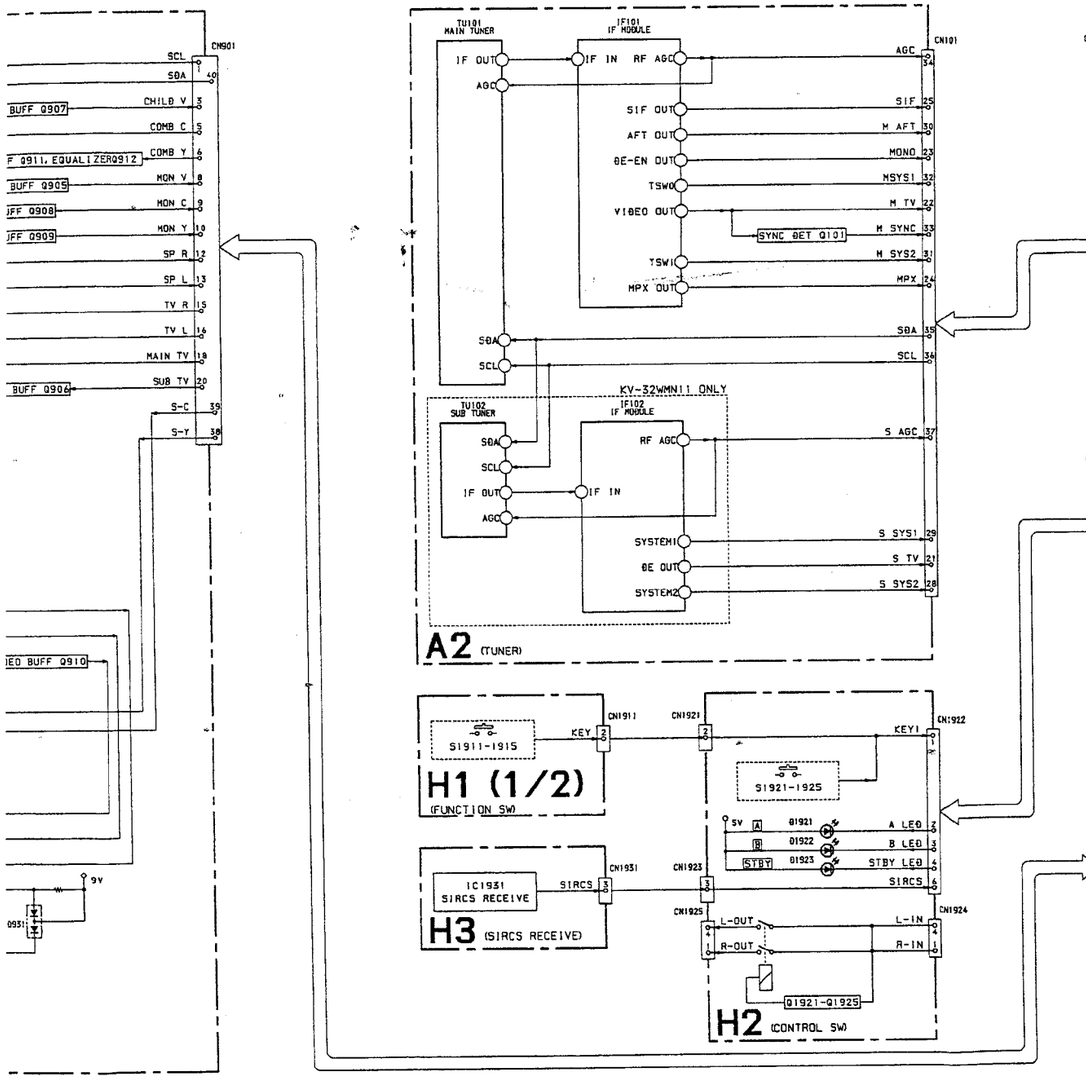
SECTION 5
DIAGRAMS

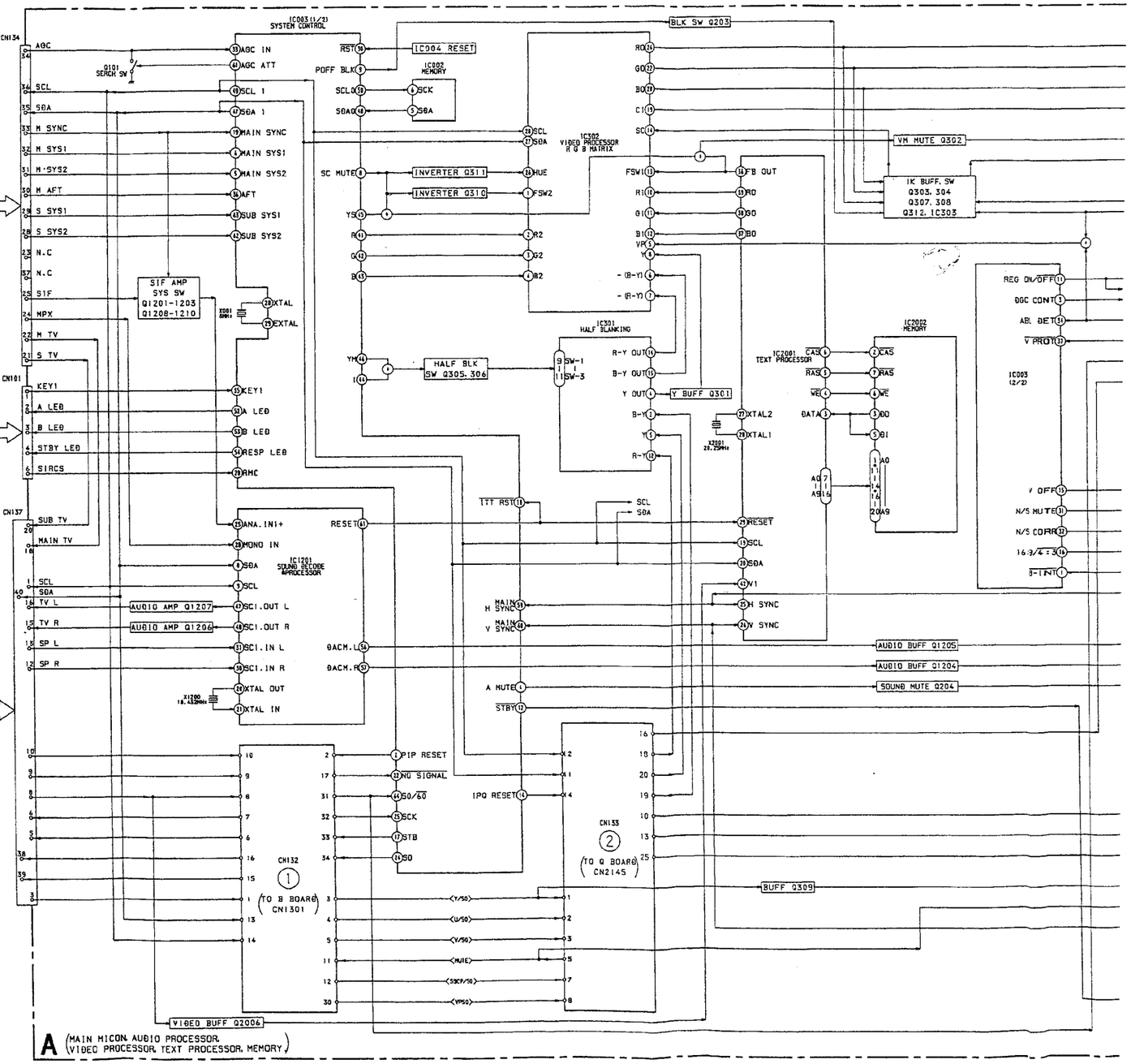
5-1. BLOCK DIAGRAM (1)



KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

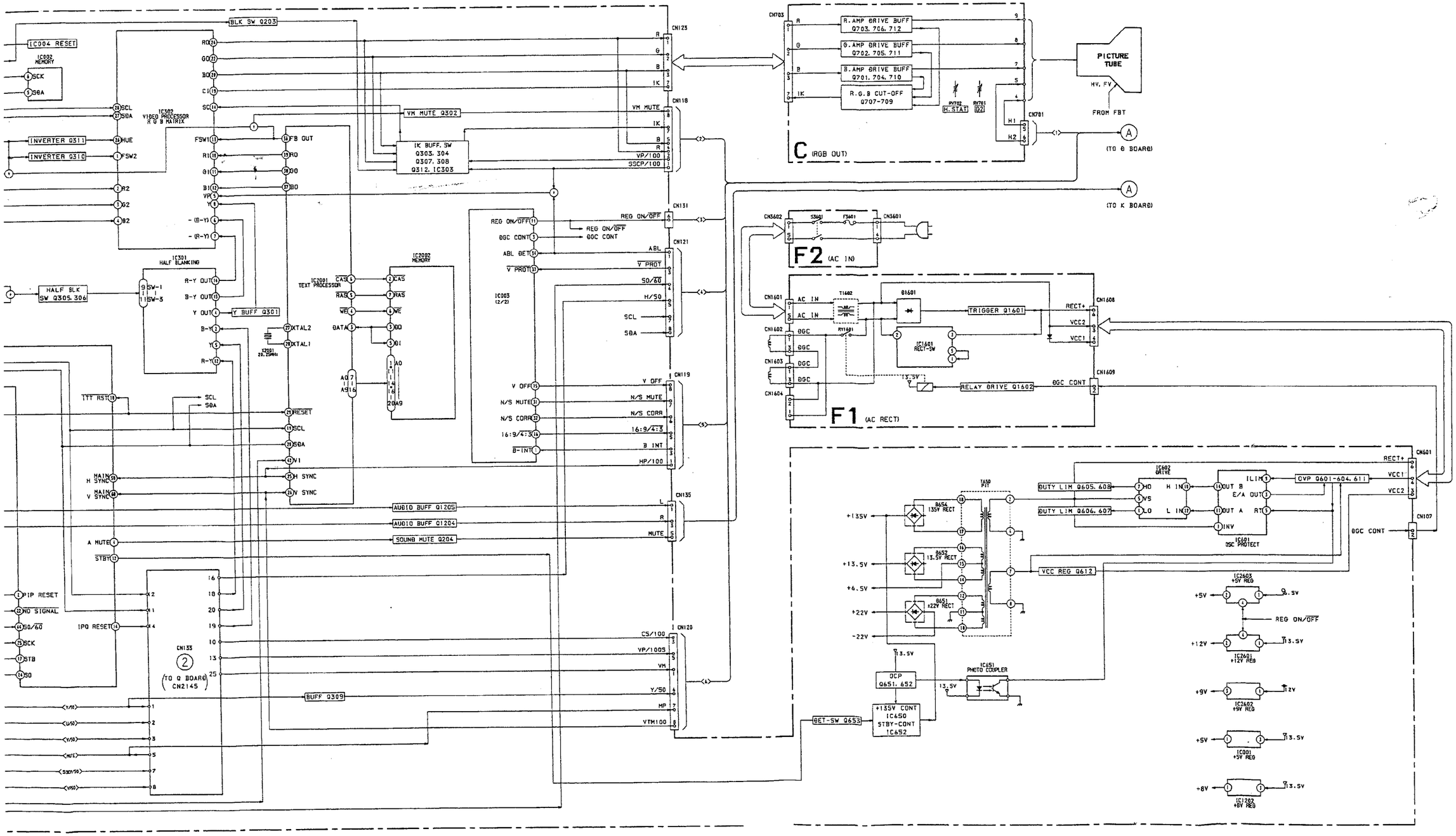
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850





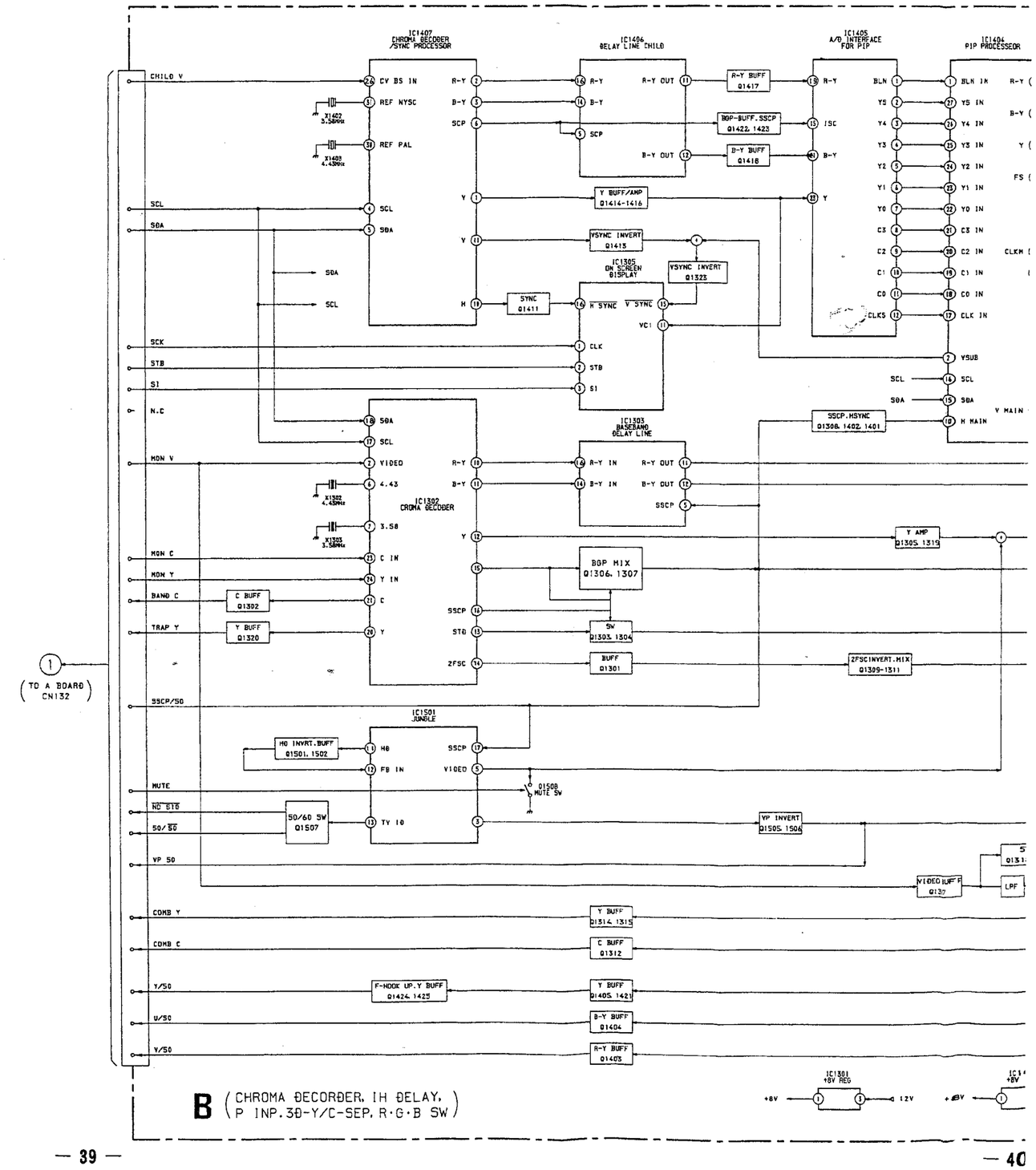
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

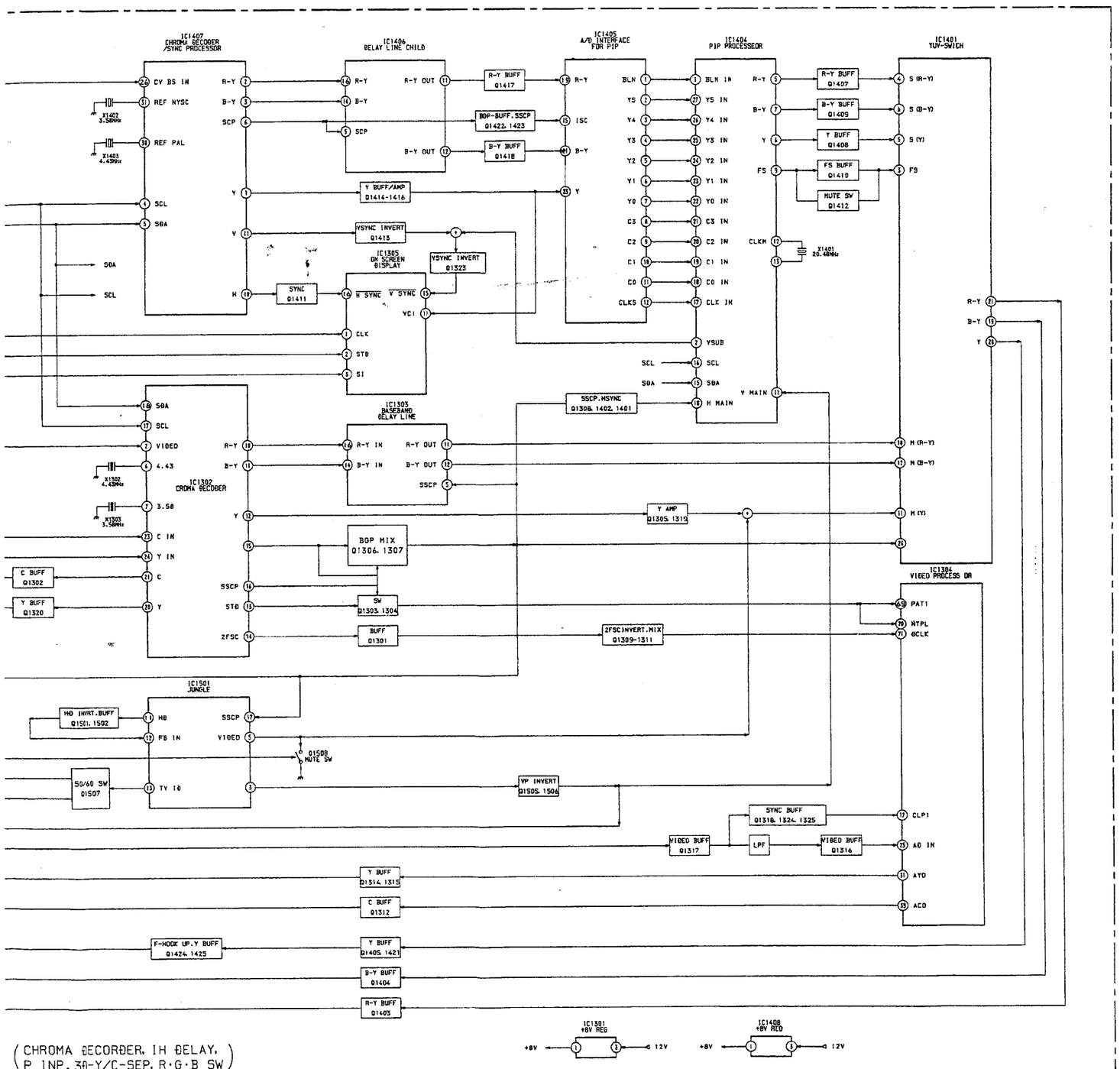


KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

BLOCK DIAGRAM (2)

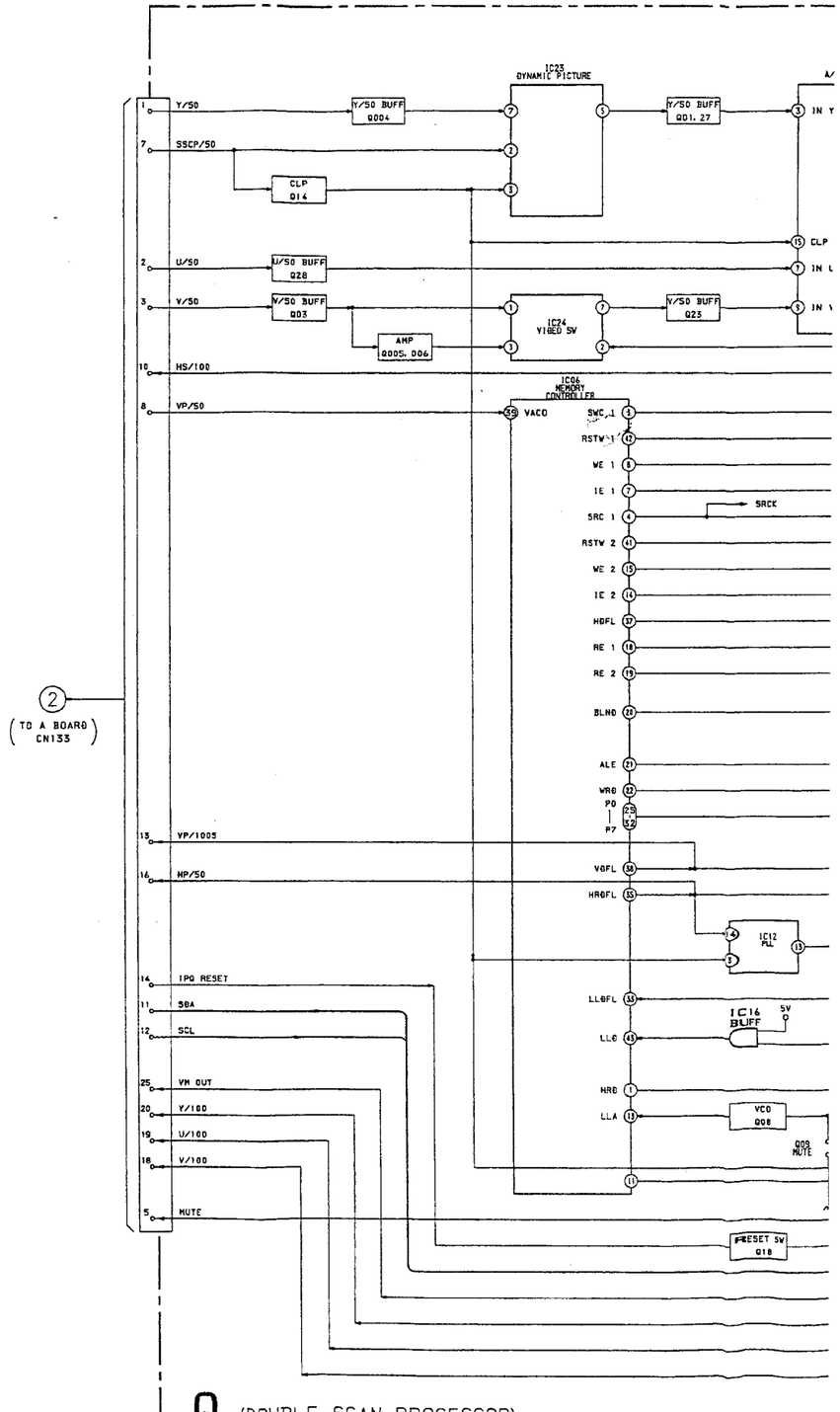


KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850



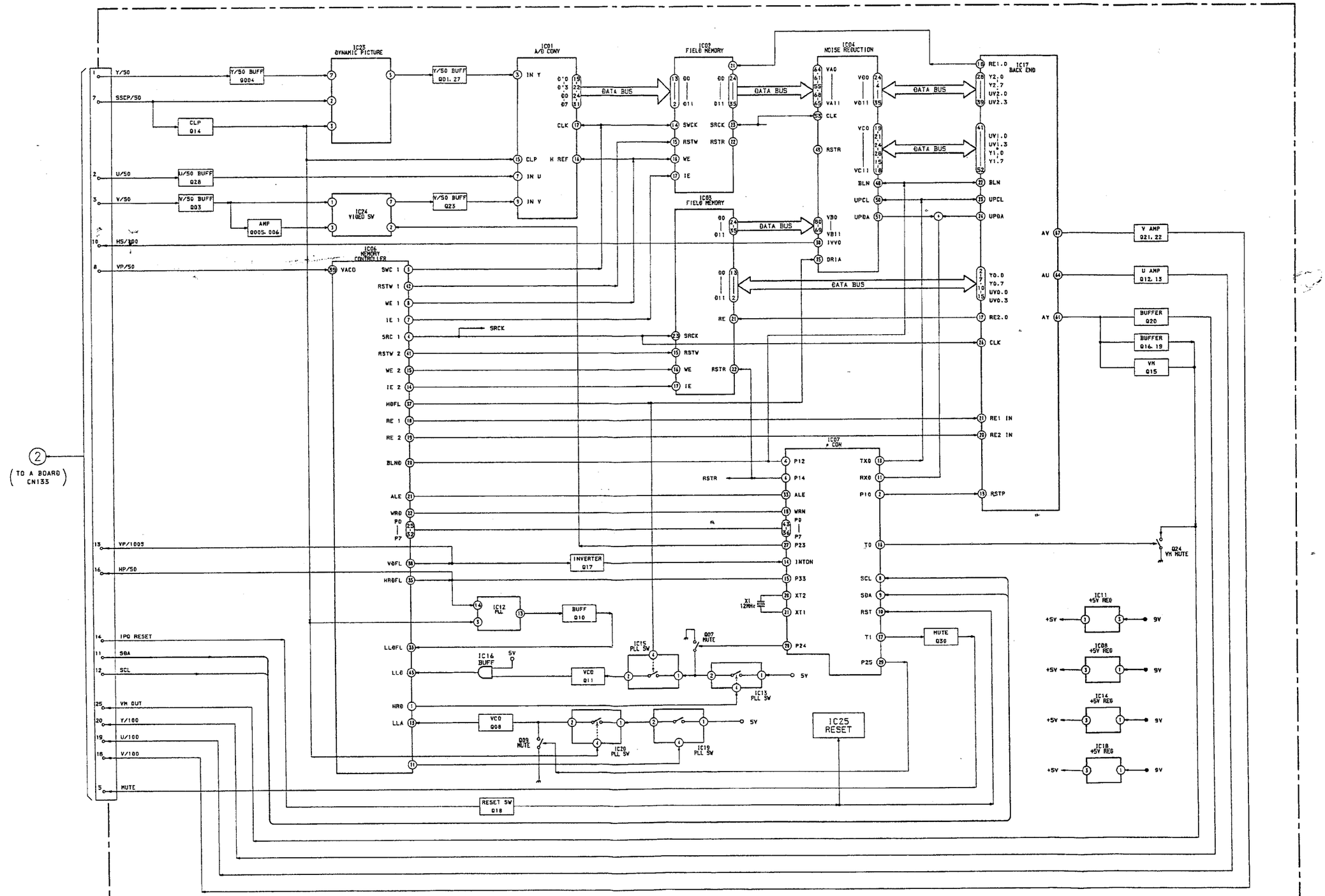
(CHROMA DECORDER, IH DELAY, P INP. 30-Y/C-SEP, R·G·B SW)

BLOCK DIAGRAM (3)



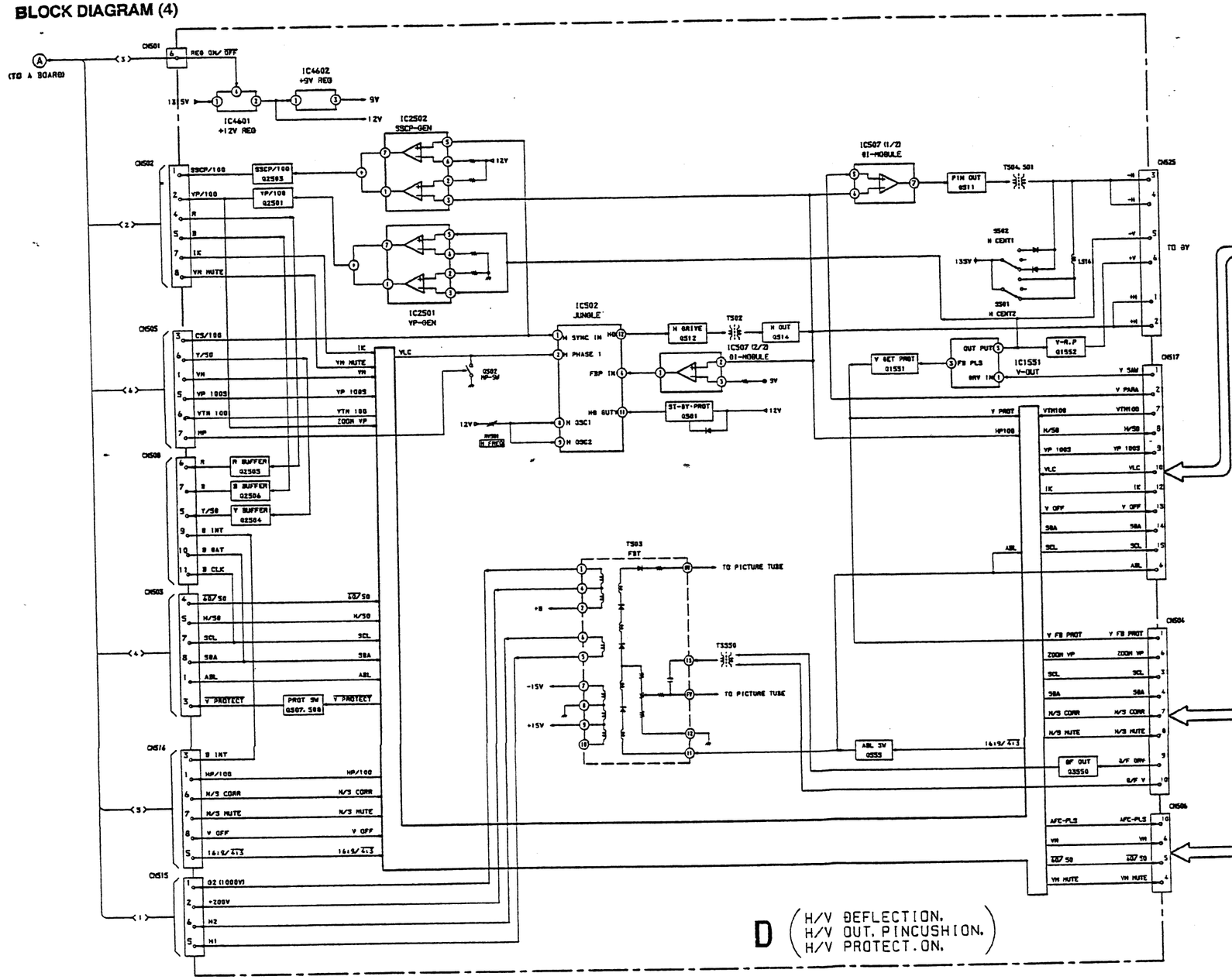
Q (DOUBLE SCAN PROCESSOR)

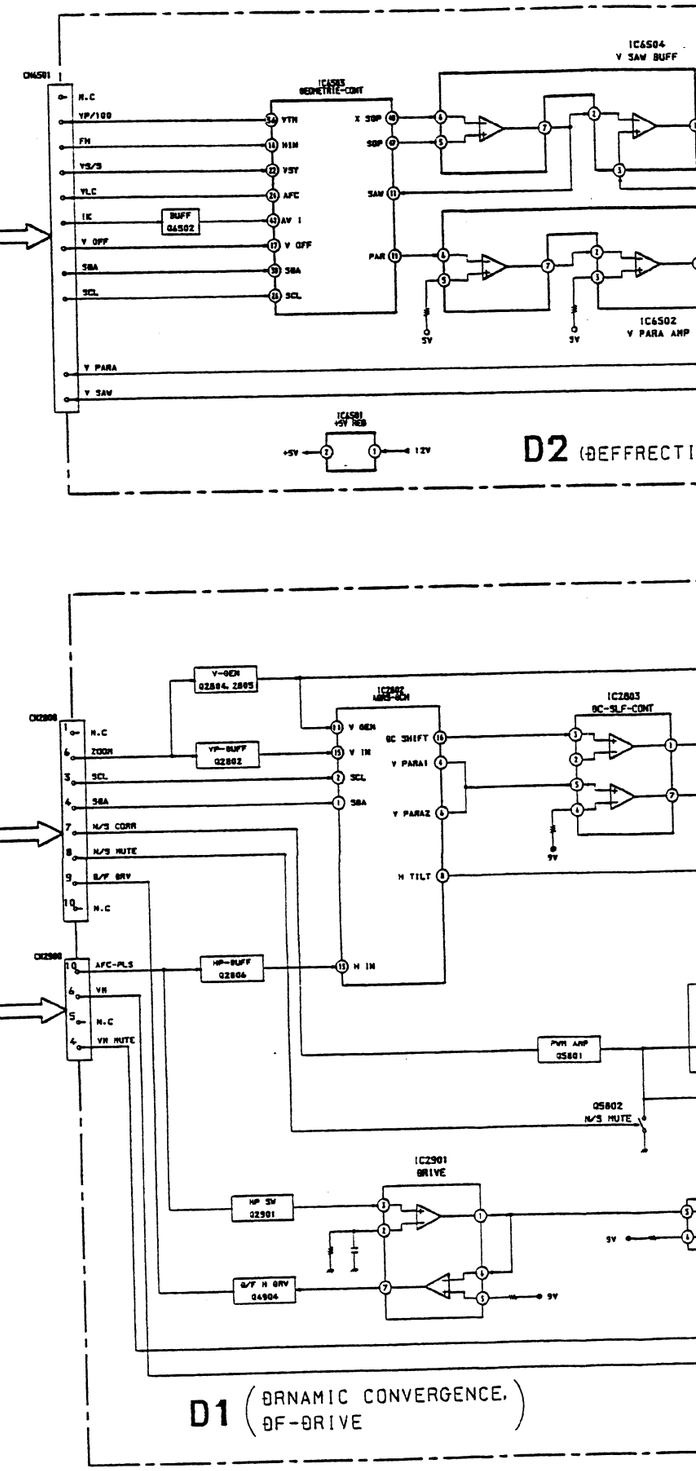
BLOCK DIAGRAM (3)

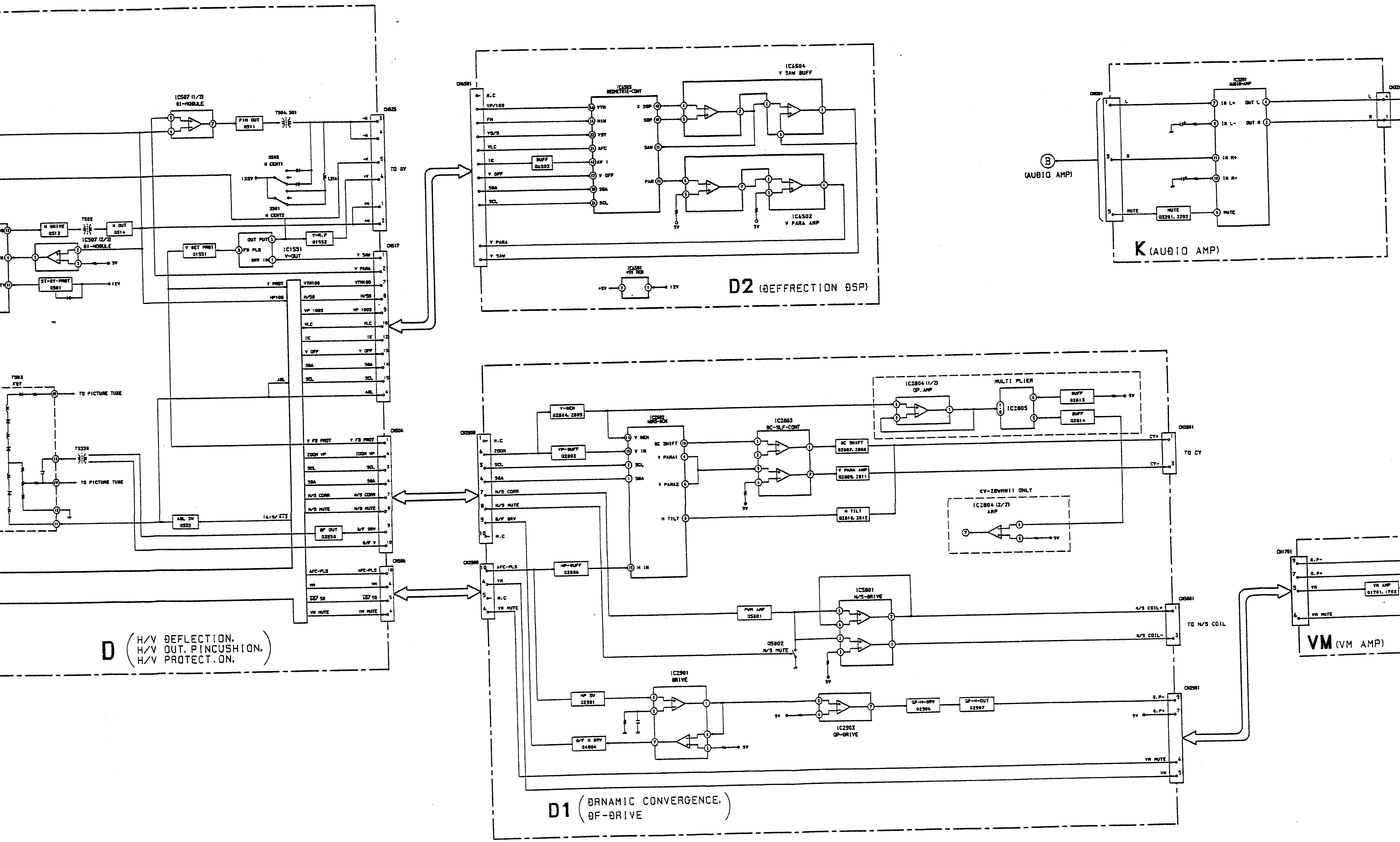


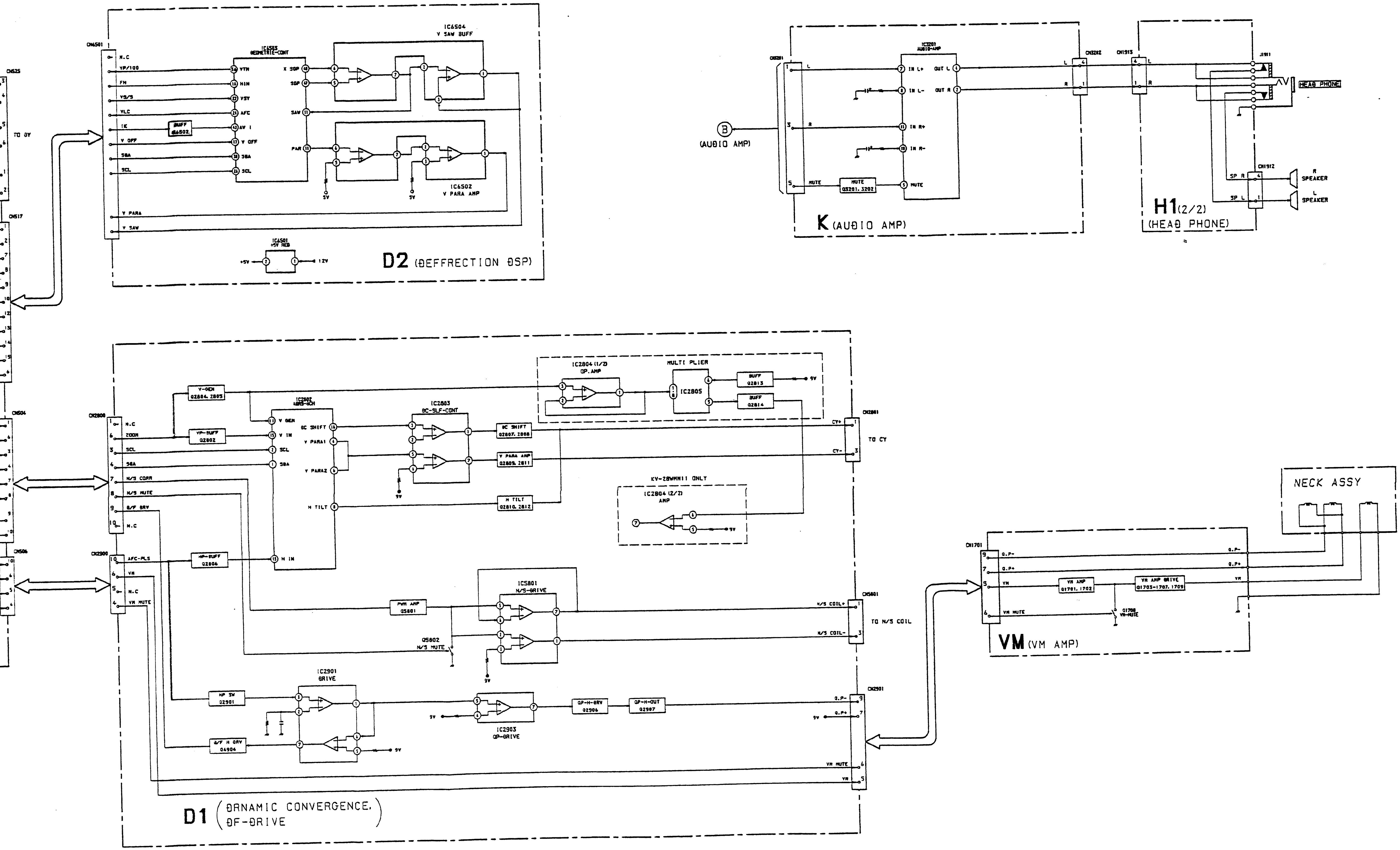
Q (DOUBLE SCAN PROCESSOR)

BLOCK DIAGRAM (4)

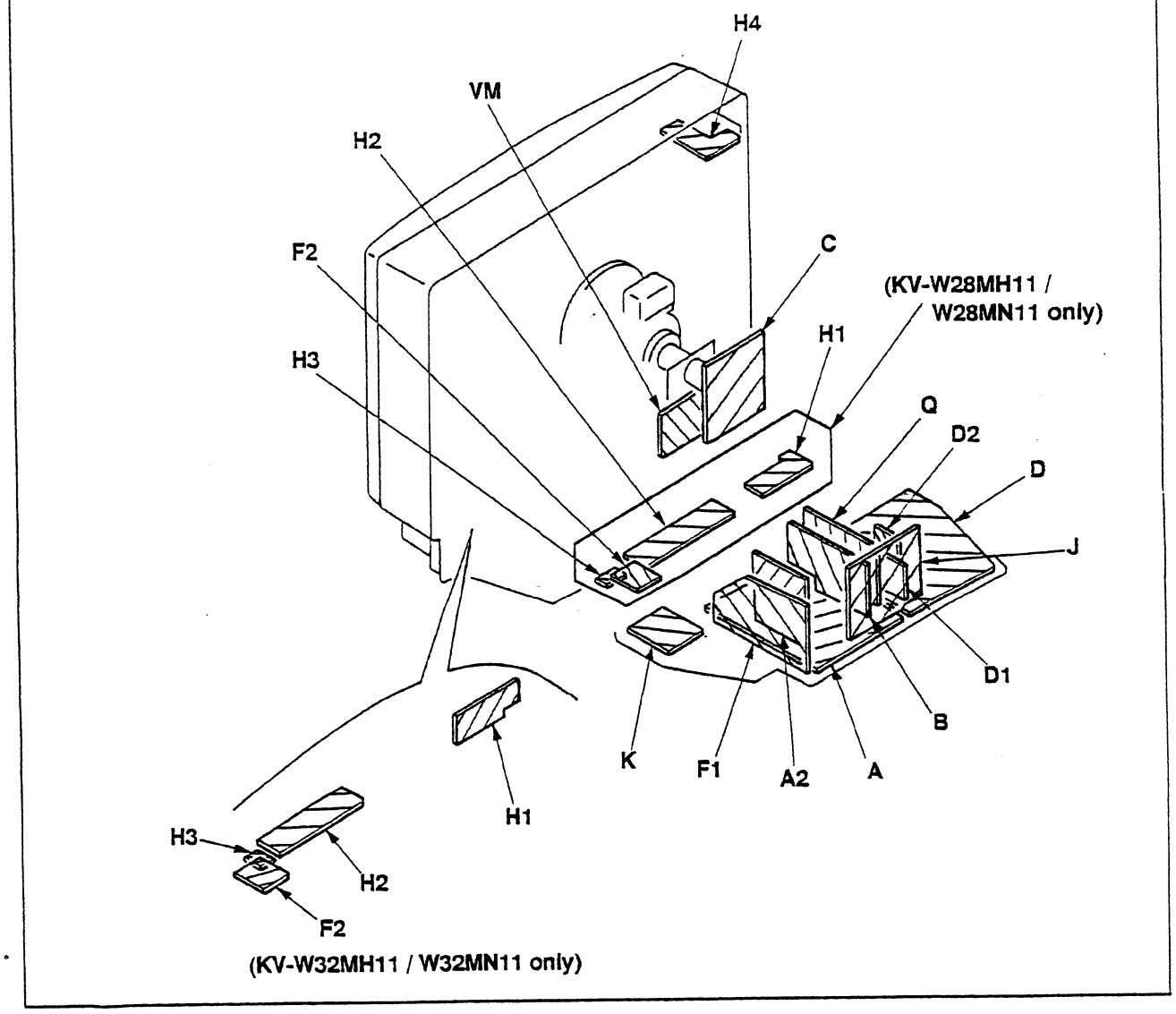




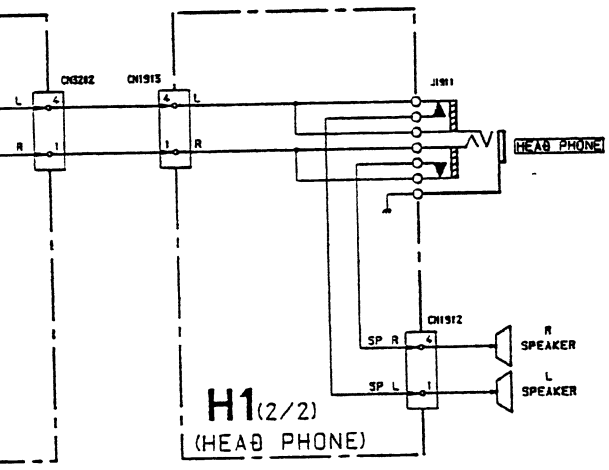

D (H/V DEFLECTION, H/V OUT, PINCUSHION, H/V PROTECT.ON.)
D2 (DEFFRECTION DSP)
D1 (DRNAMIC CONVERGENCE, DF-DRIVE)
K (AUDIO AMP)
VM (VM AMP)
(AUDIO AMP)
TO DY
TO CY
TO N/S COIL
TO PICTURE TUBE
KV-28WHH11 ONLY
MULTI PLIER
IC6504 V SAW BUFF
IC6502 V PARA AMP
IC2803 DC-SLF-CONT
IC5801 N/S-DRIVE
IC2901 DRIVE
IC2903 DP-DRIVE
IC551 V-OUT
IC507 (1/2) DI-MODULE
IC507 (2/2) DI-MODULE

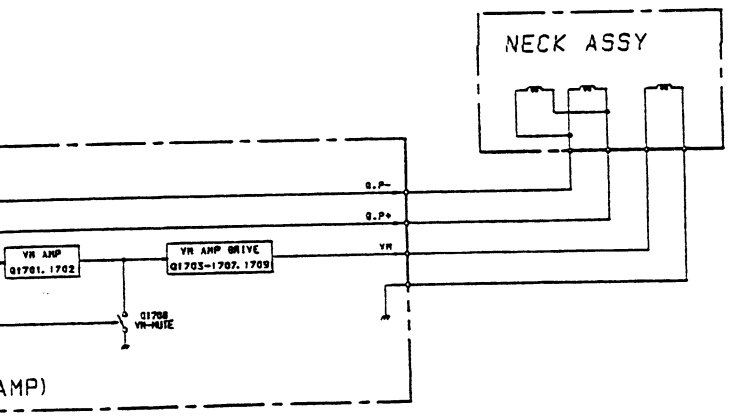

D2 (DEFFRECTION DSP)
IC6504 V SAW BUFF
IC6502 V PARA AMP
IC6501 +5V REG
TO DY
K (AUDIO AMP)
(AUDIO AMP)
H1(2/2) (HEAD PHONE)
HEAD PHONE
SPEAKER
IC2804 (1/2) OP.AMP
MULTI PLIER
IC2805
IC2803
TO CY
KV-28WHM11 ONLY
IC2804 (2/2) AMP
NECK ASSY
IC5801 N/S-DRIVE
TO N/S COIL
Q5802 N/S MUTE
IC2901 DRIVE
IC2903 OP-DRIVE
VM (VM AMP)
D1 (DRNAMIC CONVERGENCE, DF-DRIVE)

5-2. CIRCUIT BOARDS LOCATION



(KV-W32MH11 / W32MN11 only)





5-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note :

- All capacitors are in µF unless otherwise noted. pF : µµF 50V or less are not indicated except for electrolytics and tantalums.
- All electrolytics are in 50V unless otherwise specified.
- All resistors are in ohms.
  kΩ = 1000 Ω, MΩ = 1000kΩ
- Indication of resistance, which dose not have one for rating electrical power, is as follows.

Pitch : 5mm Rating electrical power : ¼W

- : nonflammable resistor.
- : fusible resistor.
- Δ : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground.
- : earth-chassis.

- Readings are taken with a color-bar signal input.
- Readings are taken with a 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
  * : Measurement impossibility.
- V : B + line.
- V : B − line.
  (Actual measured value may be different).
- : signal path. (RF)
- Circled numbers are waveform references.
- No mark : with PAL color-bar signal sreceived or common voltage.
  ( ) : with SECAM color-bar signal received.
  〈 〉 : with NTSC 3.58 color-bar signal received.
  [ ] : with NTSC 4.43 color-bar signal received.

Reference information

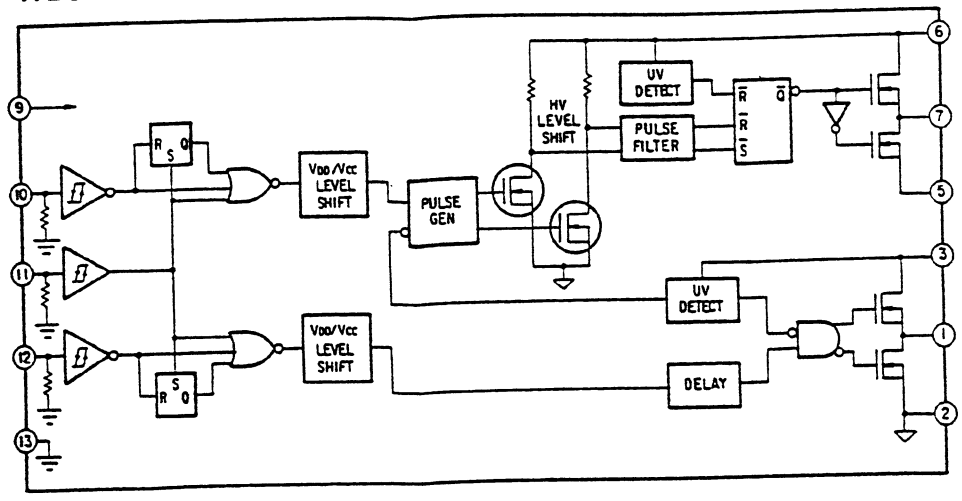
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

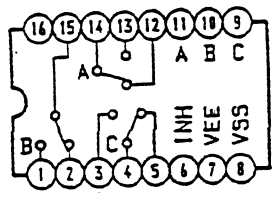
Schematic diagram

A (1/2) board ➡

A BOARD IC602 IR2112

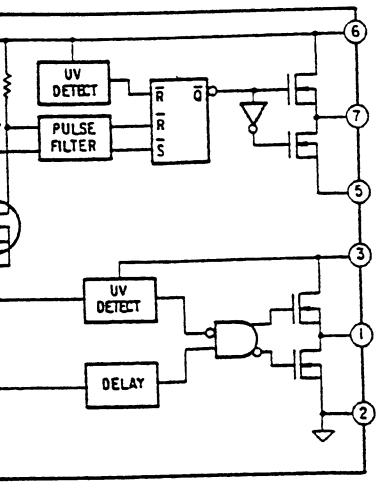


A BOARD IC301 MC14053BF

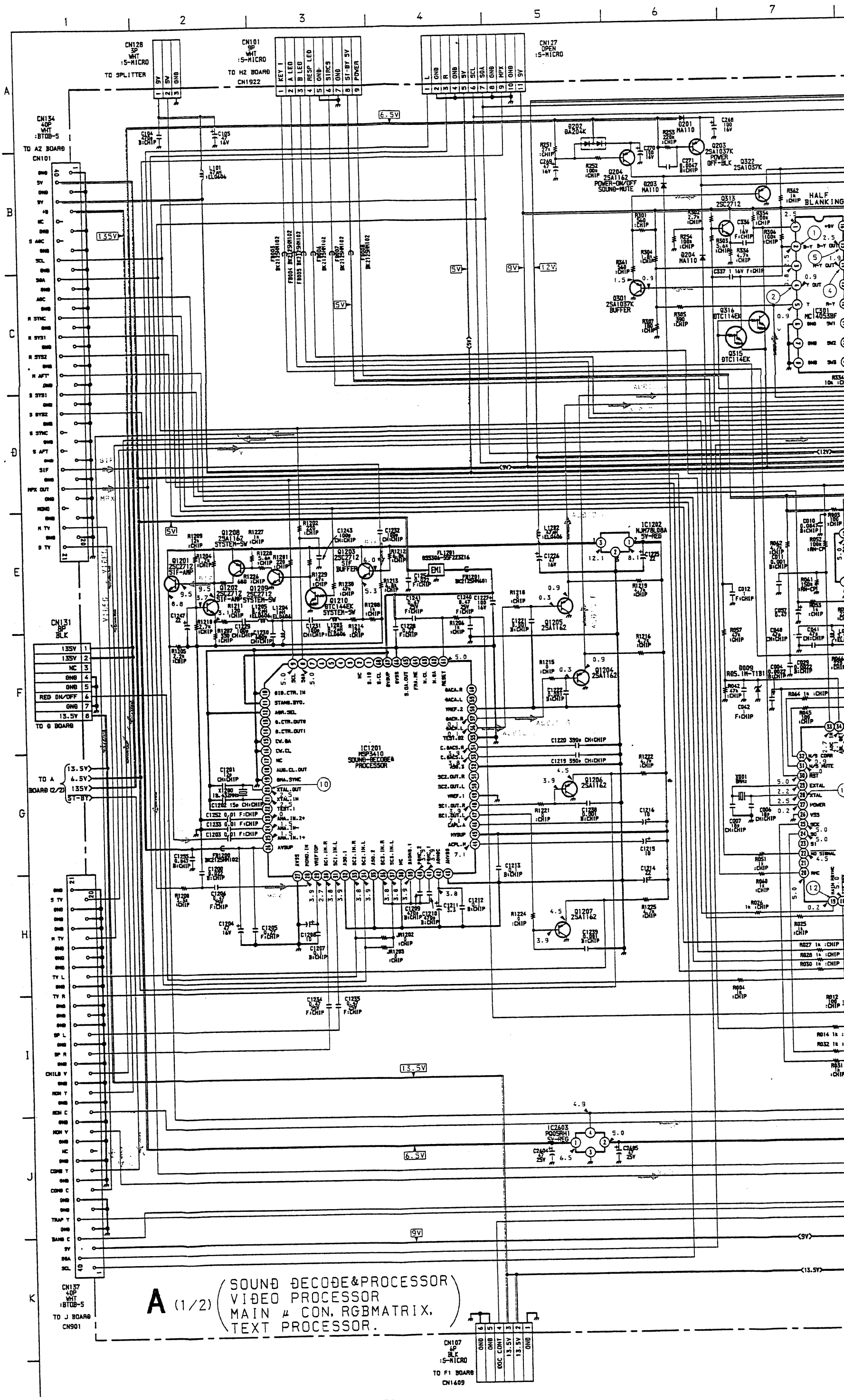


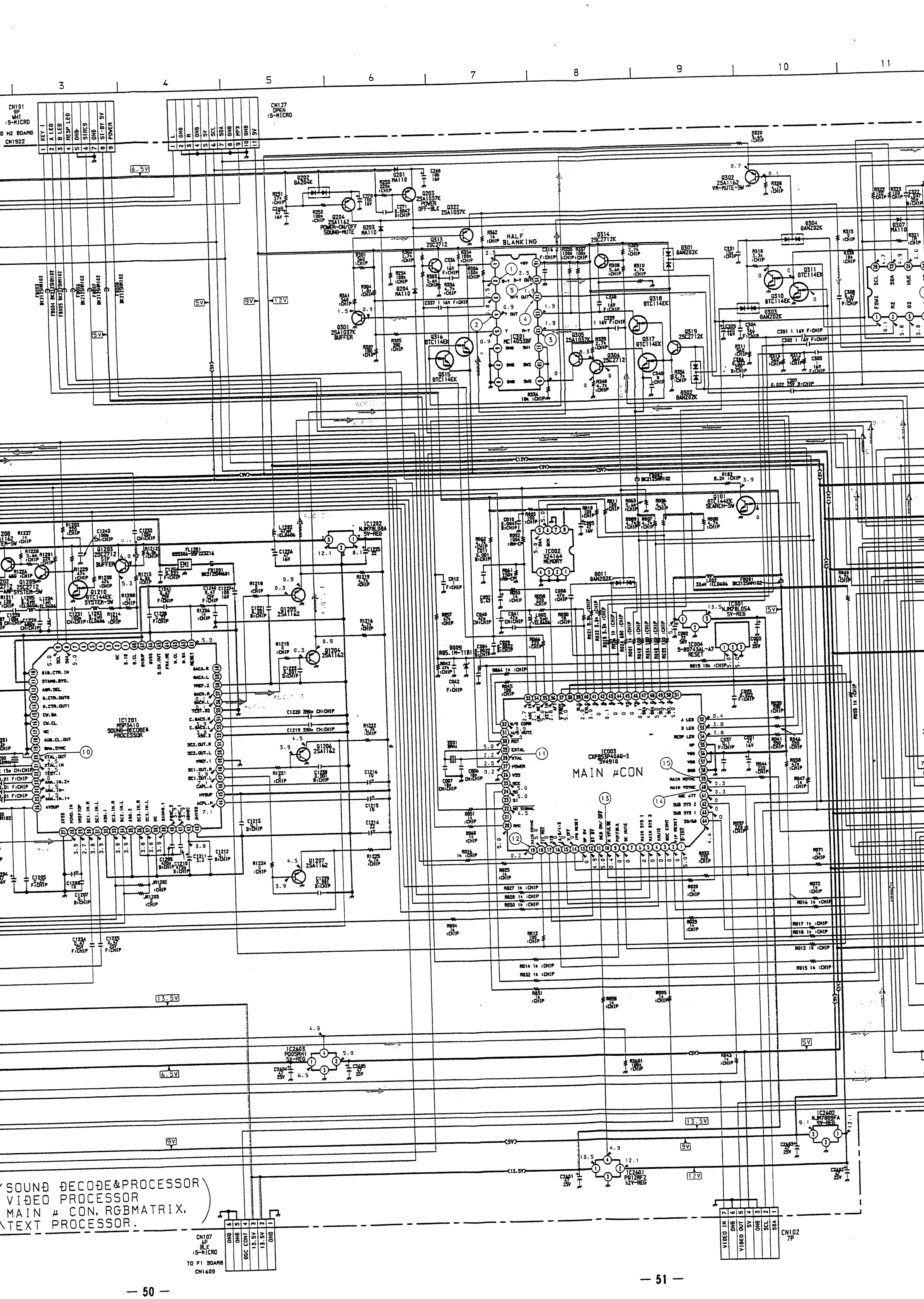
• A BOARD WAVEFORMS

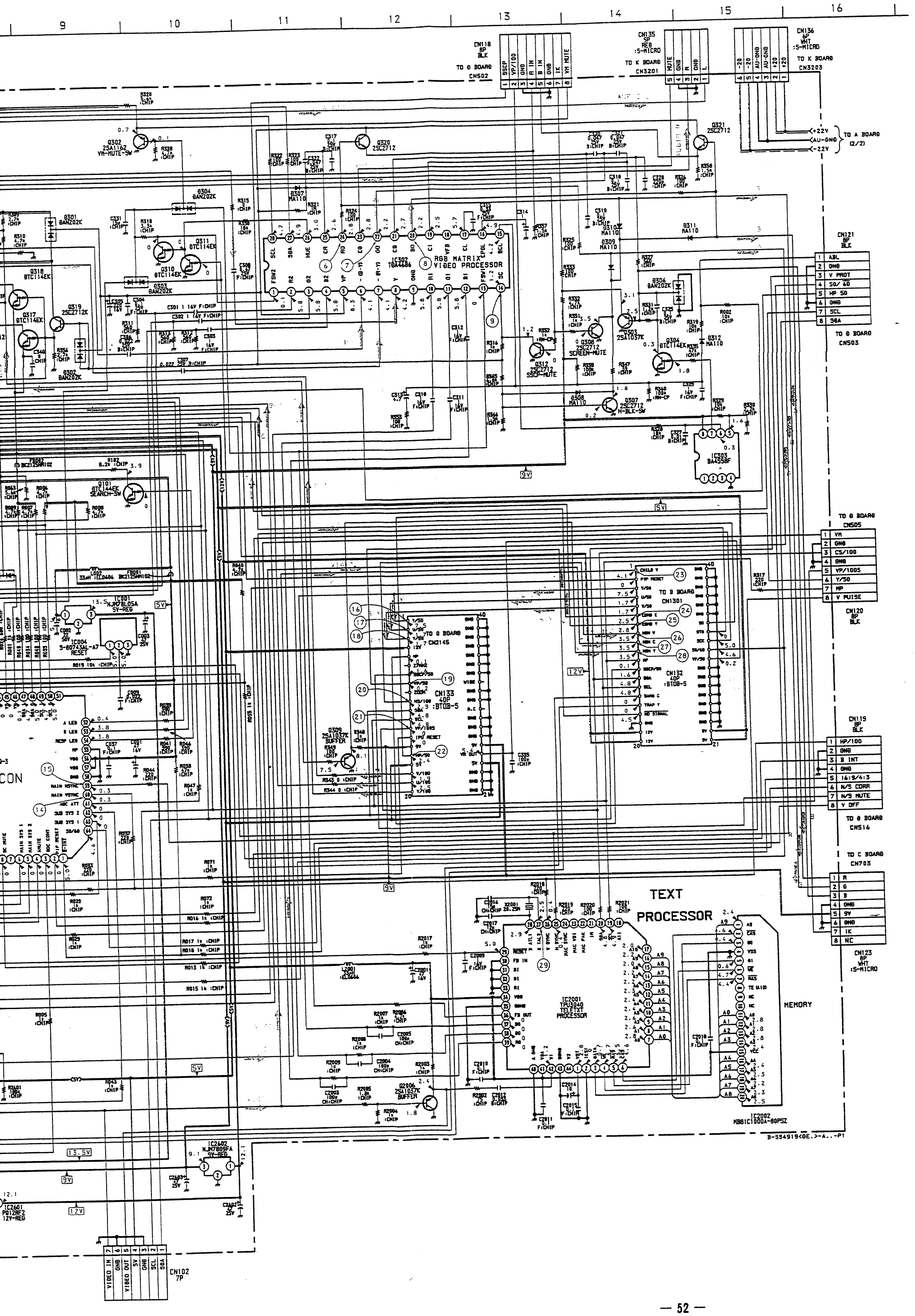
① 1.4 Vp-p (H)	② 0.4 Vp-p (H)	③ 1.2 Vp-p (H)
④ 1.2 Vp-p (H)	⑤ 1.4 Vp-p (H)	⑥ 3.2 Vp-p (H)
⑦ 3.2 Vp-p (H)	⑧ 3.0 Vp-p (H)	⑨ 9.5 Vp-p (H)
⑩ 3.8 Vp-p(18.432MHz)	⑪ 5.0 Vp-p (8MHz)	⑫ 6.5 Vp-p (H)
⑬ 4.8 Vp-p (V)	⑭ 4.8 Vp-p (V)	⑮ 6.0 Vp-p (H)
⑯ 1.8 Vp-p (H)	⑰ 1.2 Vp-p (H)	⑱ 1.1 Vp-p (H)
⑲ 4.8 Vp-p (V)	⑳ 3.2 Vp-p (H)	㉑ 5.0 Vp-p (V)
㉒ 5.0 Vp-p (H)	㉓ 1.8 Vp-p (H)	㉔ 1.1 Vp-p (H)
㉕ 2.0 Vp-p (H)	㉖ 1.8 Vp-p (H)	㉗ 1.2 Vp-p (H)
㉘ 1.9 Vp-p (H)	㉙ 1.7 Vp-p (20.25MHz)	



Vp-p (H)	③ 1.2 Vp-p (H)
Vp-p (H)	⑥ 3.2 Vp-p (H)
Vp-p (H)	⑨ 9.5 Vp-p (H)
Vp-p (8MHz)	⑫ 6.5 Vp-p (H)
Vp-p (V)	⑮ 6.0 Vp-p (H)
2 Vp-p (H)	⑱ 1.1 Vp-p (H)
2 Vp-p (H)	㉑ 5.0 Vp-p (V)
8 Vp-p (H)	㉔ 1.1 Vp-p (H)
8 Vp-p (H)	㉗ 1.2 Vp-p (H)
Vp-p (20.25MHz)	

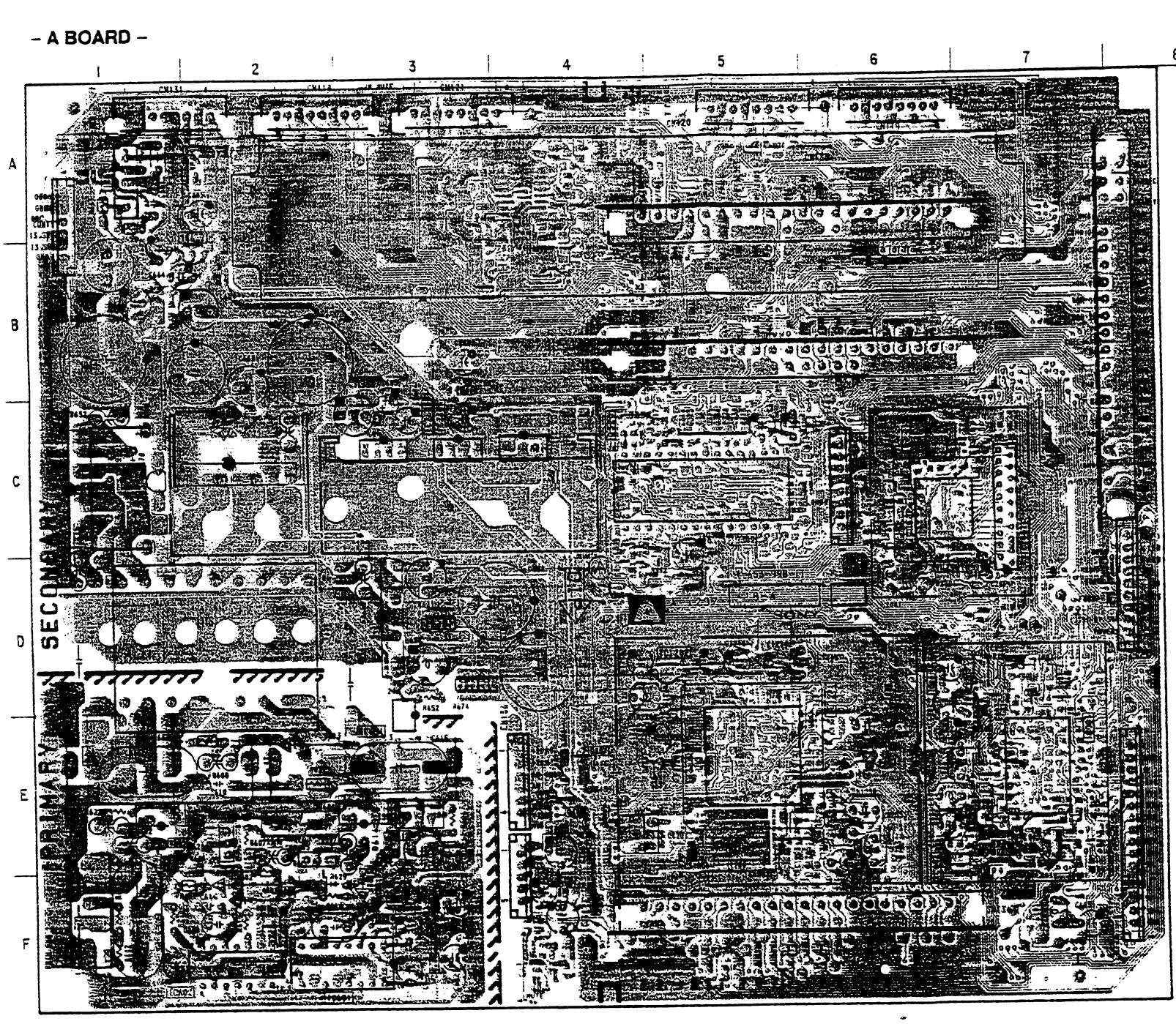


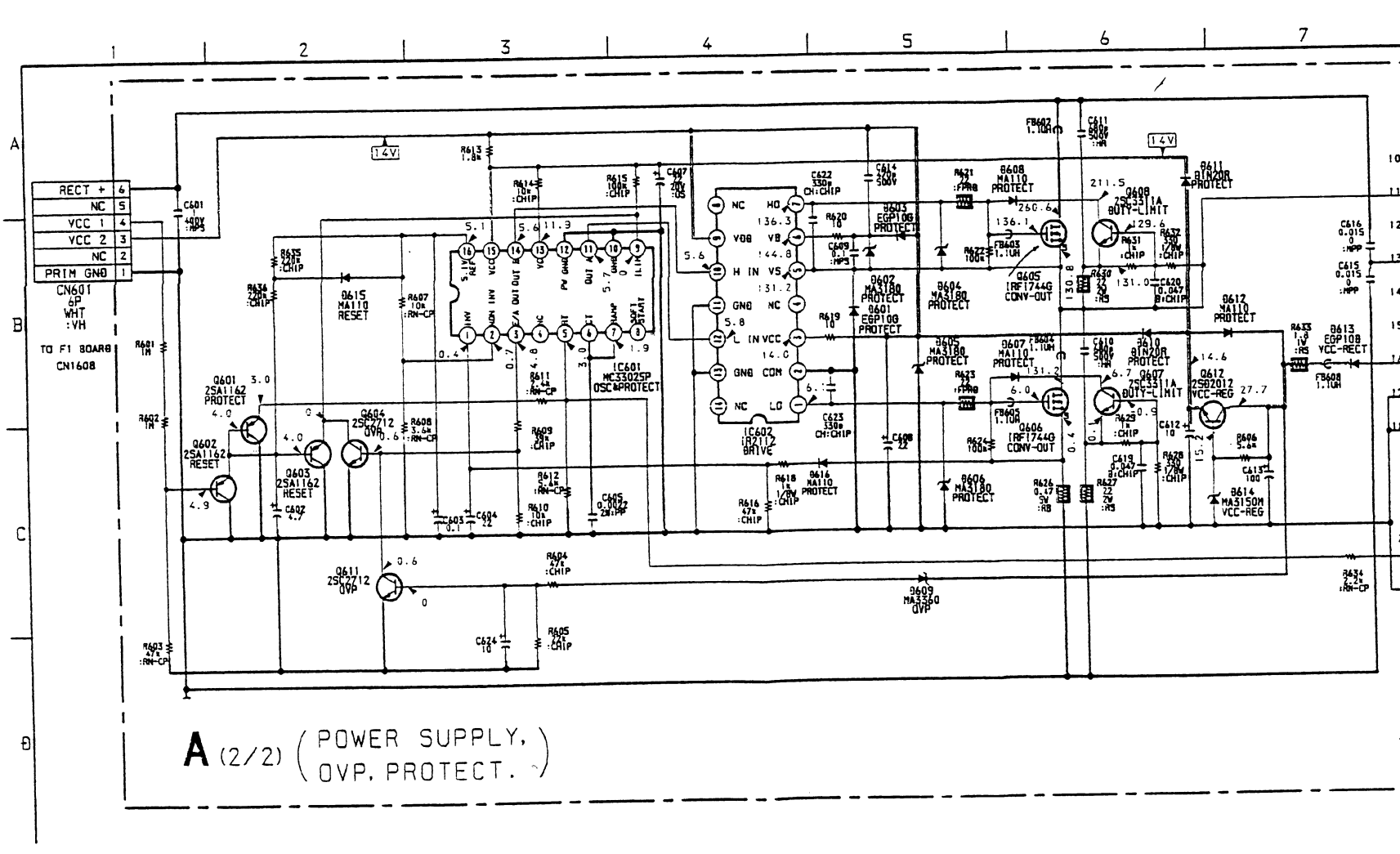

CN101 9P WHT :S-MICRO
CN1922
KEY 1
A LED
B LED
RESP LED
GND
SIRCS
GND
ST-BY 5V
POWER
CN127 OPEN :S-MICRO
L
GND
R
GND
5V
SCL
SDA
GND
HPX
GND
9V
6.5V
5V
9V
12V
Q202 BA204K
Q201 MA110
Q203 2SA1037K POWER OFF-BLK
Q204 2SA1162 POWER-ON/OFF SOUND-MUTE
D203 MA110
Q322 2SA1037K
Q313 2SC2712
HALF BLANKING
Q314 2SC2712K
Q301 2SA1037K BUFFER
Q316 DTC114EK
Q315 DTC114EK
IC301 MC14053BF
Q305 2SA1037K
Q306 2SC2712
Q317 DTC114EK
Q319 2SC2712K
Q318 DTC114EK
D301 BAN202K
D304 BAN202K
D303 BAN202K
D302 BAN202K
Q311 DTC114EK
Q310 DTC114EK
Q302 2SA1162 VM-MUTE-SW
D204 MA110
D205 MA110
D206 MA110
D207 MA110
D208 MA110
FB003 BK2125HM102
FB004 BK2125HM102
FB005 BK2125HM102
FB006 BK2125HM102
FB007 BK2125HM102
FB008 BK2125HM102
IC1201 MSP3410 SOUND-DECODE& PROCESSOR
IC1202 NJM78L08A 5V-REG
Q1203 2SC2712 BUFFER
Q1210 DTC144EK SYSTEM-SW
Q1209 2SC2712 AMP SYSTEM-SW
Q1205 2SA1162
Q1206 2SA1162
Q1207 2SA1162
FL1201 EMI
IC1002 X24164 MEMORY
IC1003 CXP853P40A0-3 5V4918 MAIN μCON
IC1001 NJM78L05A 5V-REG
IC1004 S-80743AL-A7 RESET
Q101 DTC144EK SEARCH-SW
D011 BAN202K
D009 RBS1H-T1B1
XT001 8MHz
IC2603 PQ05RH1 5V-REG
IC2601 PQ12RF2 12V-REG
IC2602 NJM7809FA 9V-REG
CN107 6P BLK :S-MICRO TO F1 BOARD CN1609
GND
GND
OSC CONT
13.5V
13.5V
GND
CN102 7P
VIDEO IN
GND
VIDEO OUT
5V
GND
SCL
SDA
SOUND DECODE&PROCESSOR
VIDEO PROCESSOR
MAIN μ CON, RGBMATRIX,
TEXT PROCESSOR.


9
10
11
12
13
14
15
16
CN118 8P BLK
TO B BOARD
CN502
SSCP
VP/100
GND
R IN
B IN
GND
IK
VM MUTE
CN135 5P RGB :S-MICRO
TO K BOARD
CN3201
MUTE
GND
R
GND
L
CN136 6P WHT :S-MICRO
TO K BOARD
CN3203
-20
-20
AU-GND
AU-GND
+20
+20
+22V
AU-GND
-22V
TO A BOARD (2/2)
Q302 2SA1162 VM-MUTE-SW
Q320 2SC2712
Q321 2SC2712
Q301 BAN202K
Q304 BAN202K
Q303 BAN202K
Q310 DTC114EK
Q311 DTC114EK
Q318 DTC114EK
Q317 DTC114EK
Q319 2SC2712K
Q302 BAN202K
IC302 T0AA686
RGB MATRIX VIDEO PROCESSOR
SCL
SDA
HUE
CR
RO
CG
GO
CB
BO
CI
VFB
CL
CPOL
BCL
FSW2
R2
G2
B2
VP
-(B-Y)
-(R-Y)
Y
GND
RI
GI
BI
FSW1
SC
Q306 BAN202K
Q303 2SA1037K
Q308 2SC2712 SCREEN-MUTE
Q312 2SC2712 SSCP-MUTE
Q304 DTC114EK
Q307 2SC2712 H-BLK-SW
Q312 HA110
Q308 HA110
IC303 BA4558F
CN121 8P BLK
ABL
GND
Y PROT
50/60
HP 50
GND
SCL
SDA
TO B BOARD
CN503
TO B BOARD
CN505
VM
GND
CS/100
GND
VP/100S
Y/50
MP
V PULSE
CN120 8P BLK
CN119 8P BLK
HP/100
GND
B INT
GND
16:9/4:3
N/S CORR
N/S MUTE
V OFF
TO B BOARD
CN516
TO C BOARD
CN703
R
G
B
GND
5V
GND
IK
NC
CN123 8P WHT :S-MICRO
IC1001 NJM78L05A 5V-REG
IC1004 S-80743AL-A7 RESET
IC2602 NJM7809FA 9V-REG
IC2601 PQ12RF2 12V-REG
Q101 DTC144EK SEARCH-SW
Q309 2SA1037K BUFFER
Q2006 2SA1037K BUFFER
TO B BOARD
CN214S
CN133 40P :BTOB-S
TO B BOARD
CN1301
CN132 40P :BTOB-S
TEXT PROCESSOR
IC2001 TPU3040 TELETXT PROCESSOR
X2001 28.2SM
MEMORY
IC2002 MB81C1000A-80PSZ
CN102 7P
VIDEO IN
GND
VIDEO OUT
5V
GND
SCL
SDA
5V
9V
12V
13.5V
B-SS4919<GE.>-A..-P1

A SOUND DECODE & PROCESSOR, VIDEO PROCESSOR, MAIN µCON, RGB MATRIX, TEXT PROCESSOR, POWER SUPPLY, OVP

– A BOARD –



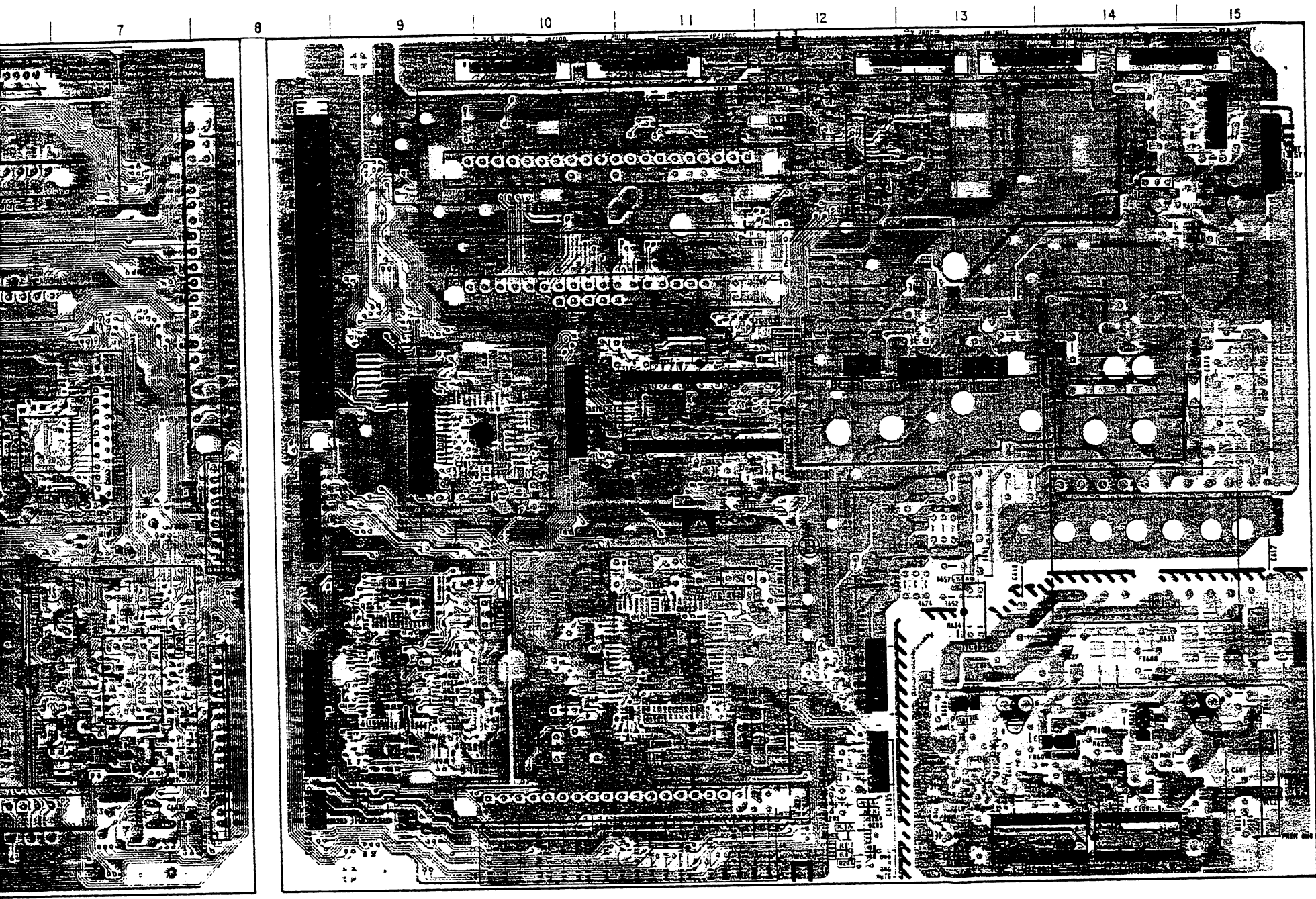


A (2/2) (POWER SUPPLY, OVP, PROTECT.)

Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

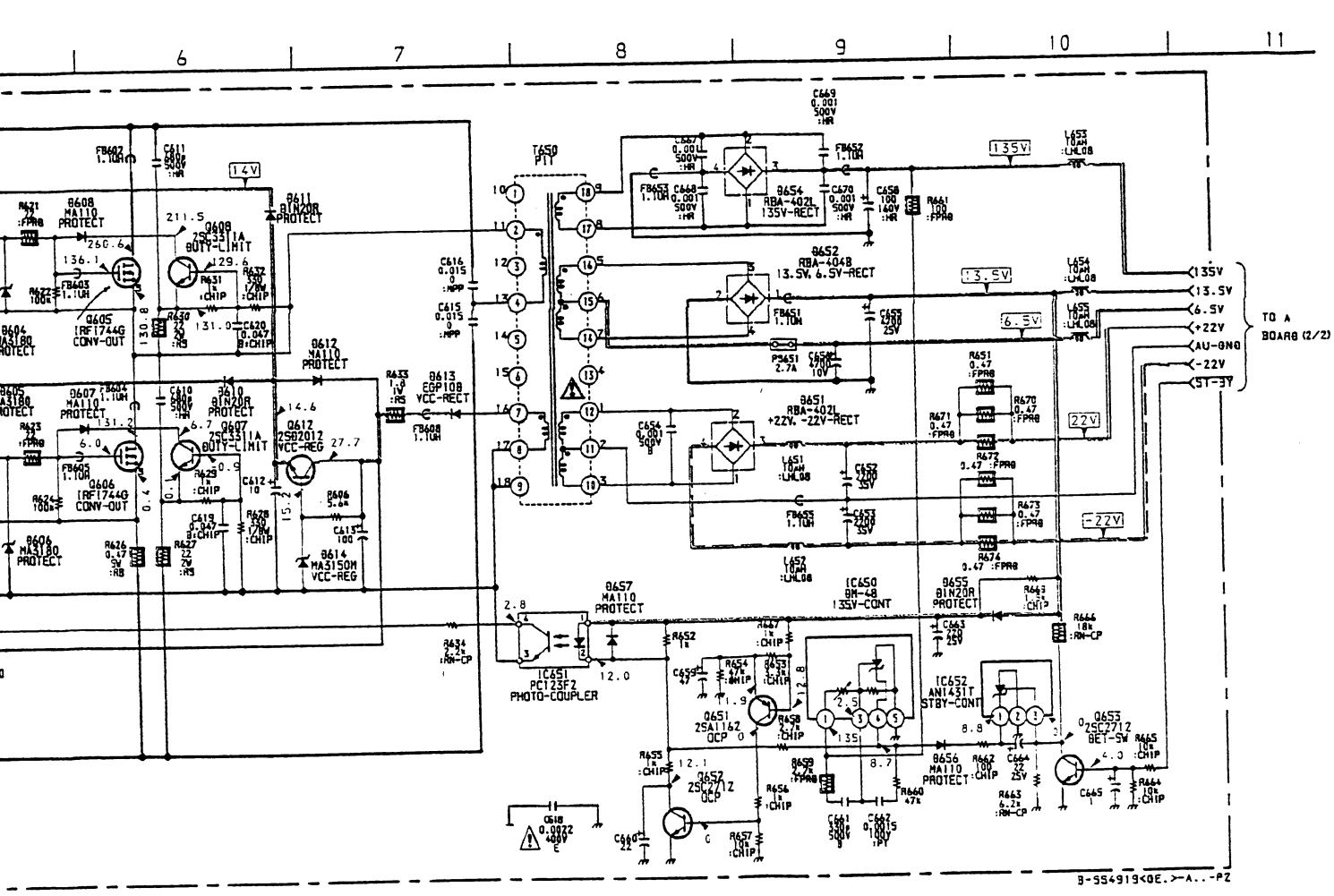
A BOARD



IC	
IC001	D – 6, D – 9
IC002	E – 6
IC003	E – 7
IC004	
IC301	A – 12
IC302	C – 5
IC303	C – 11
IC601	F – 2, F – 14
IC602	F – 2, F – 14
IC650	A – 1, A – 15
IC651	E – 3, E – 13
IC652	B – 2, B – 14
IC1201	E – 5
IC1202	D – 5, D – 11
IC2001	C – 6
IC2002	C – 7, C – 9
IC2601	C – 3, C – 13
IC2602	C – 4, C – 12
IC2603	C – 3, C – 13

TRANSISTOR	
Q101	E – 9
Q203	F – 12
Q204	F – 12
Q301	A – 13
Q302	C – 11
Q303	C – 10
Q304	C – 11
Q305	A – 12
Q306	A – 12
Q307	E – 4
Q308	E – 4

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

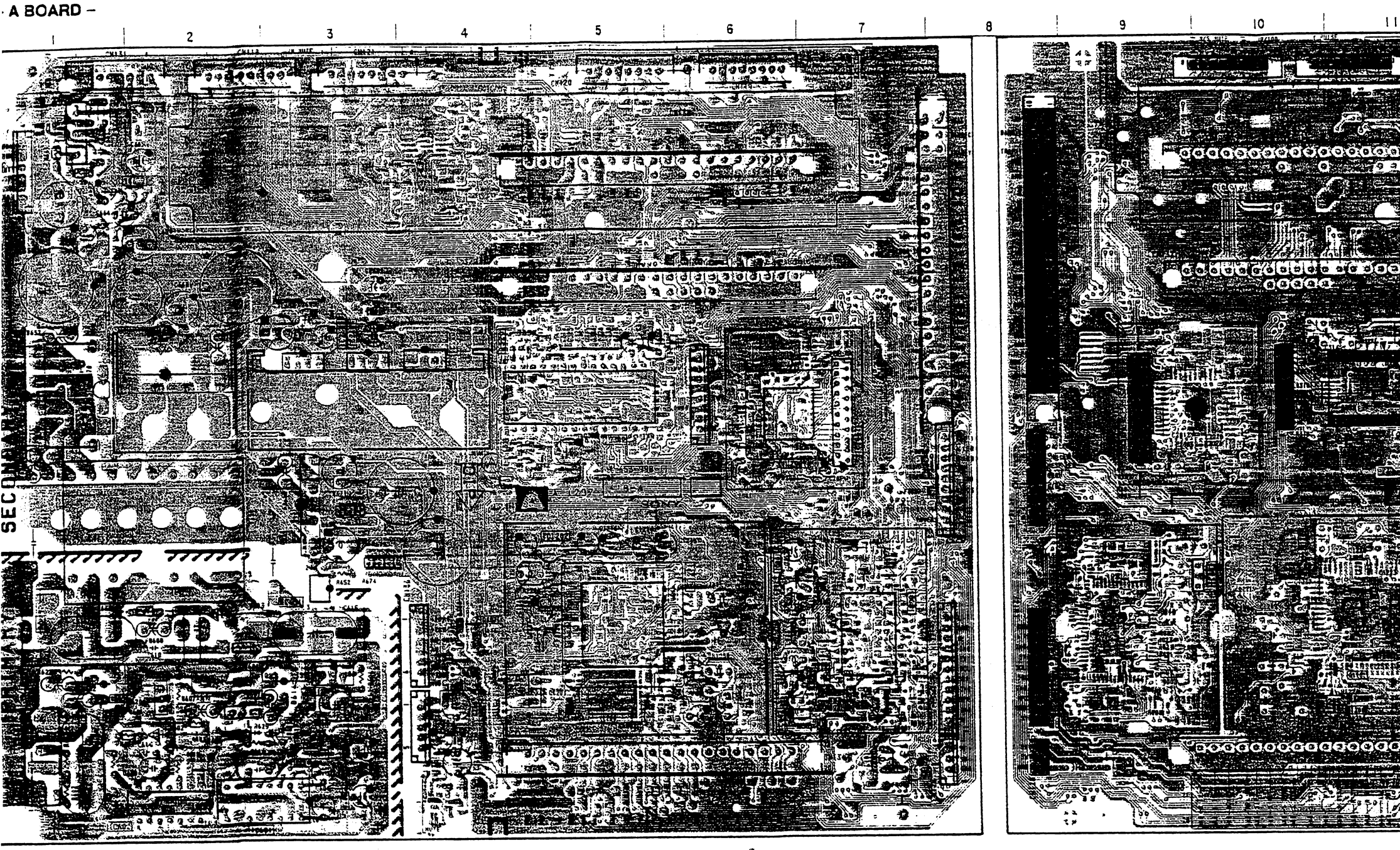


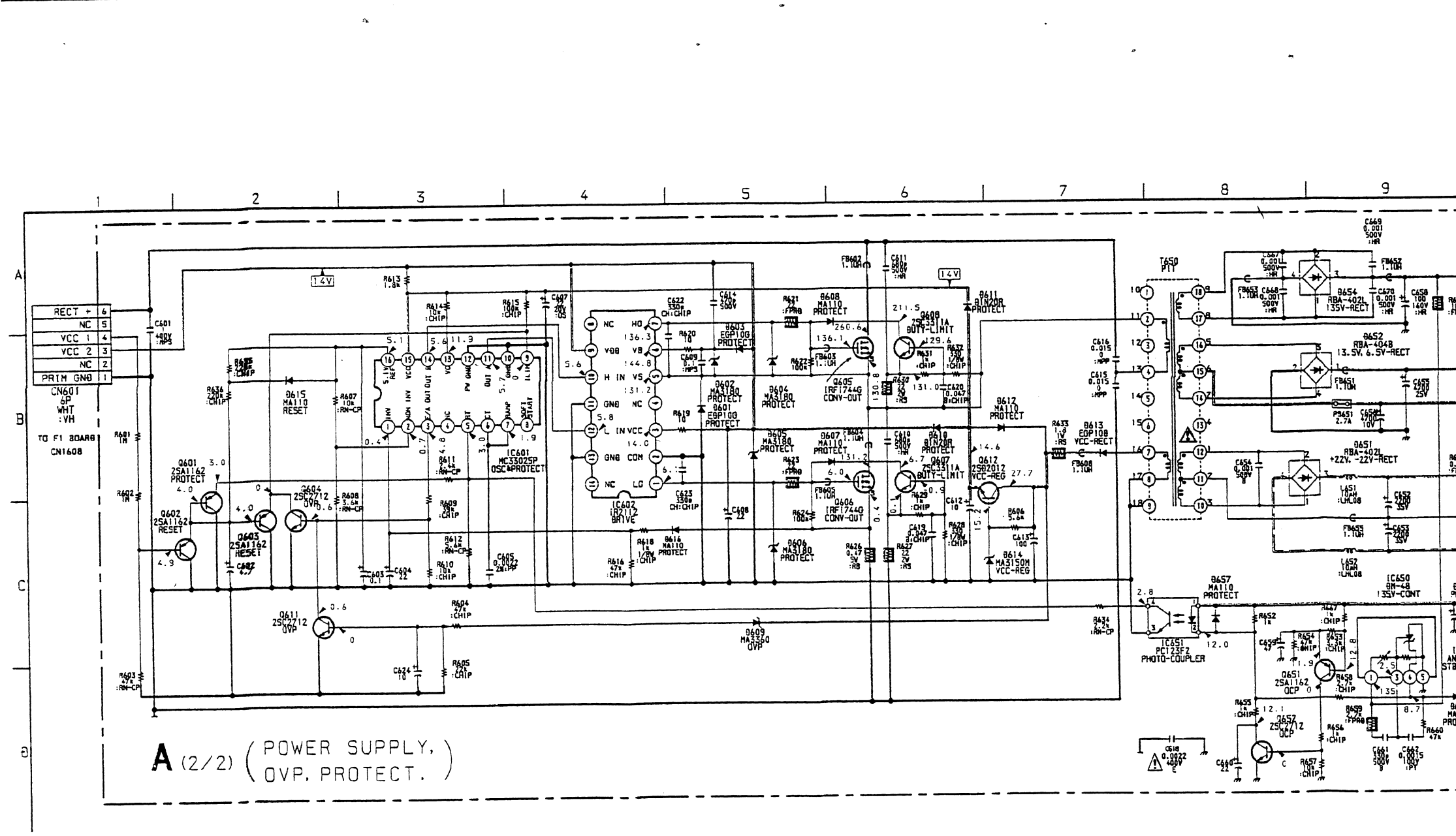
Schematic diagram

← A (2/2) board

A [SOUND DECODE & PROCESSOR, VIDEO PROCESSOR, MAIN μCON, RGB MATRIX, TEXT PROCESSOR, POWER SUPPLY, OVP]

· A BOARD –

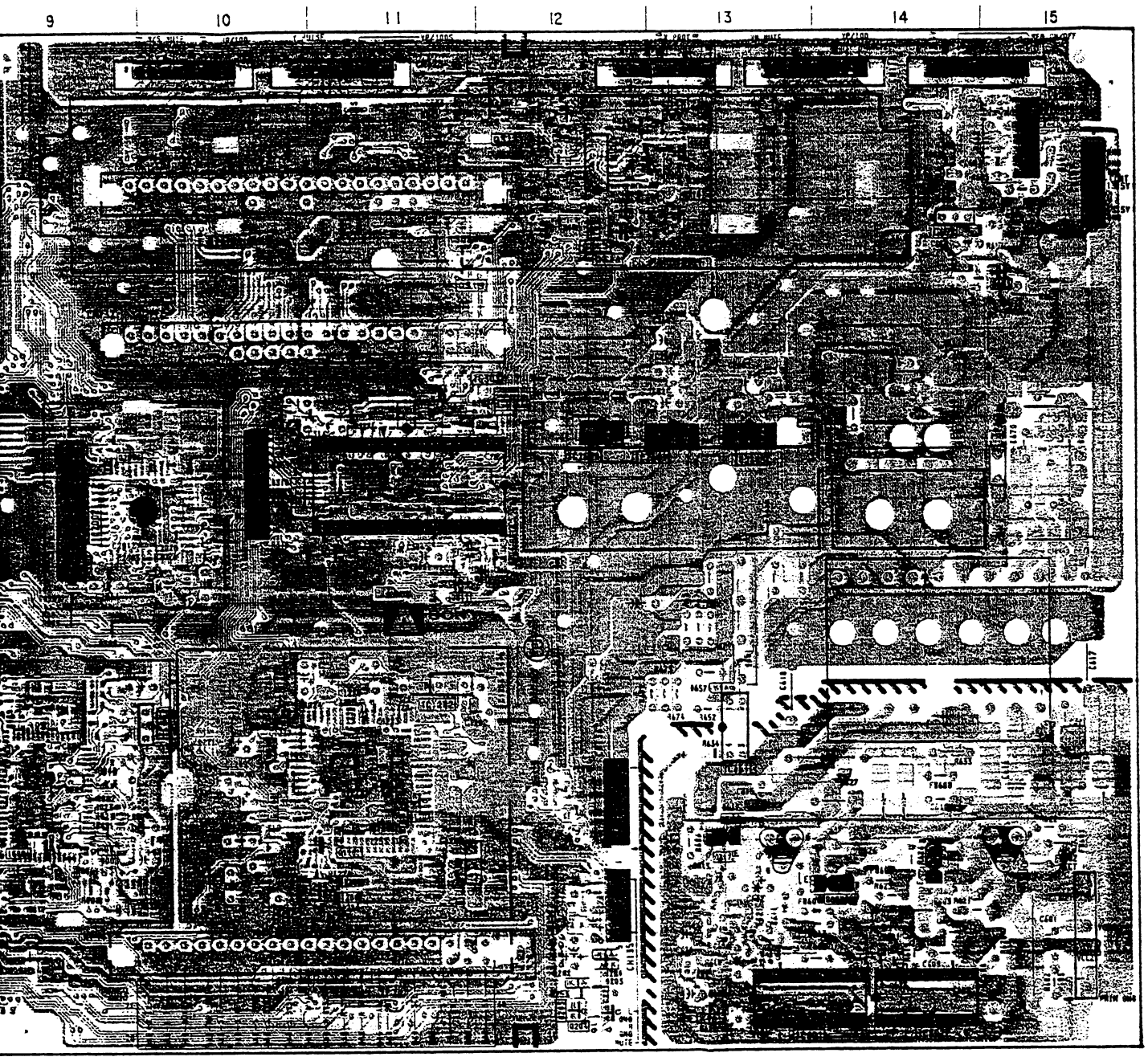




A (2/2) (POWER SUPPLY, OVP, PROTECT.)

Note :

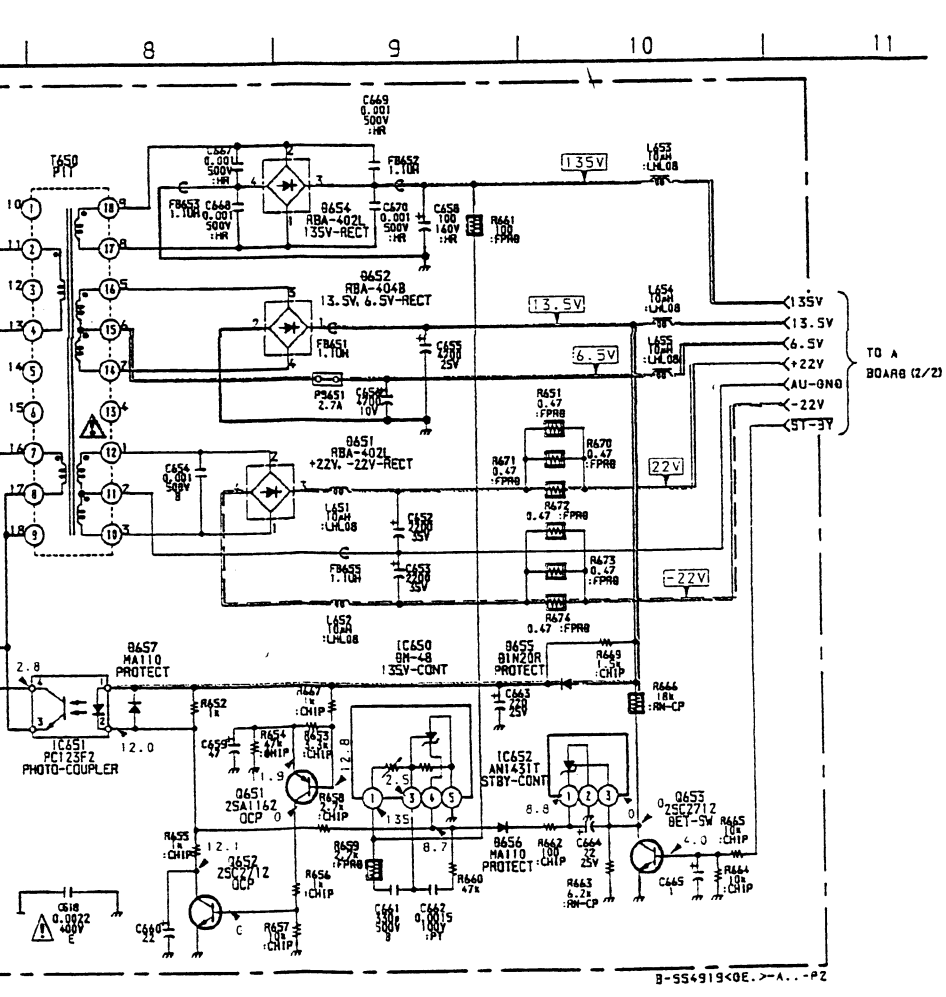
- ~~~~~ : Pattern from the side which enables seeing.
- ▒▒▒ : Pattern of the rear side.

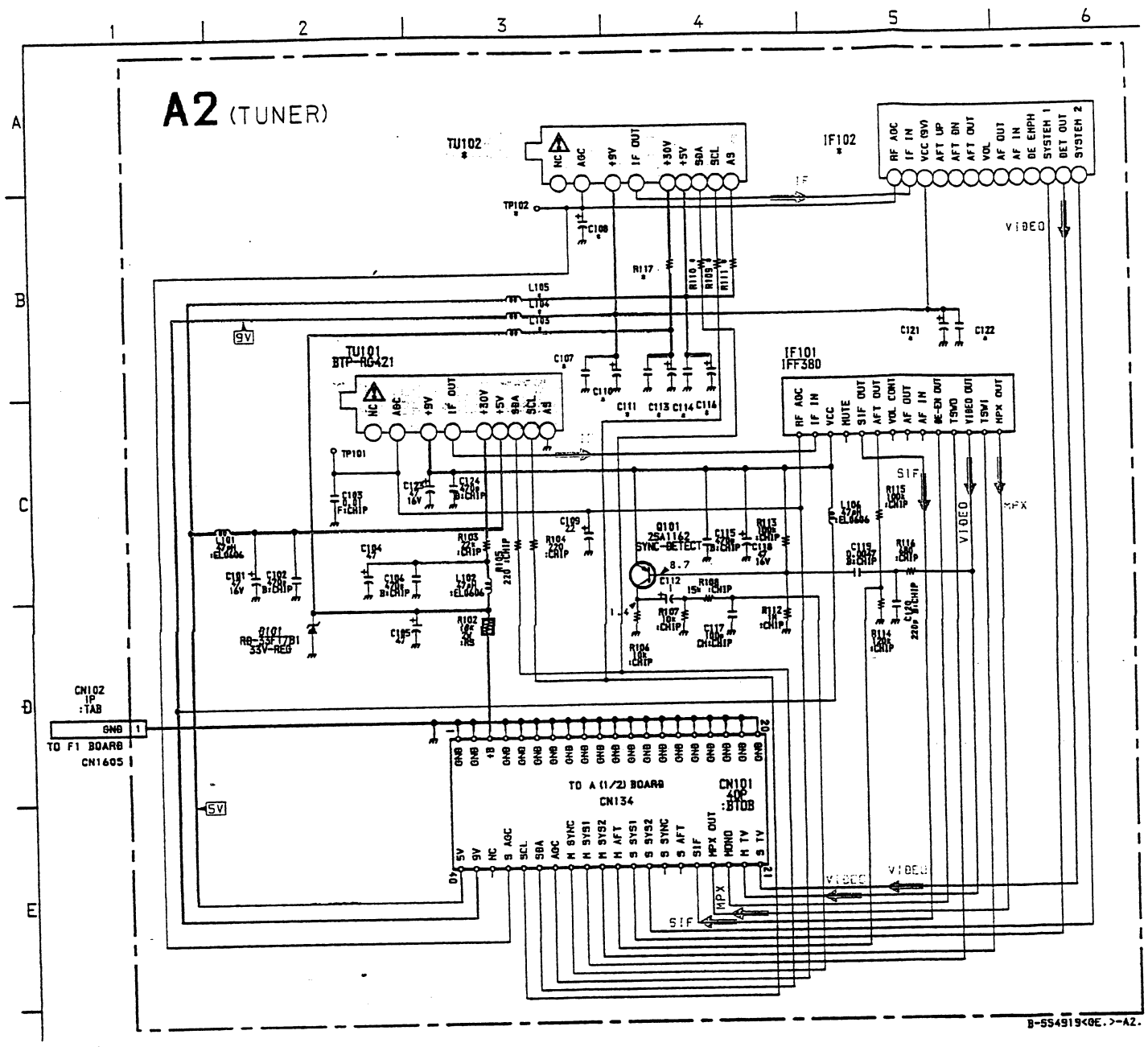


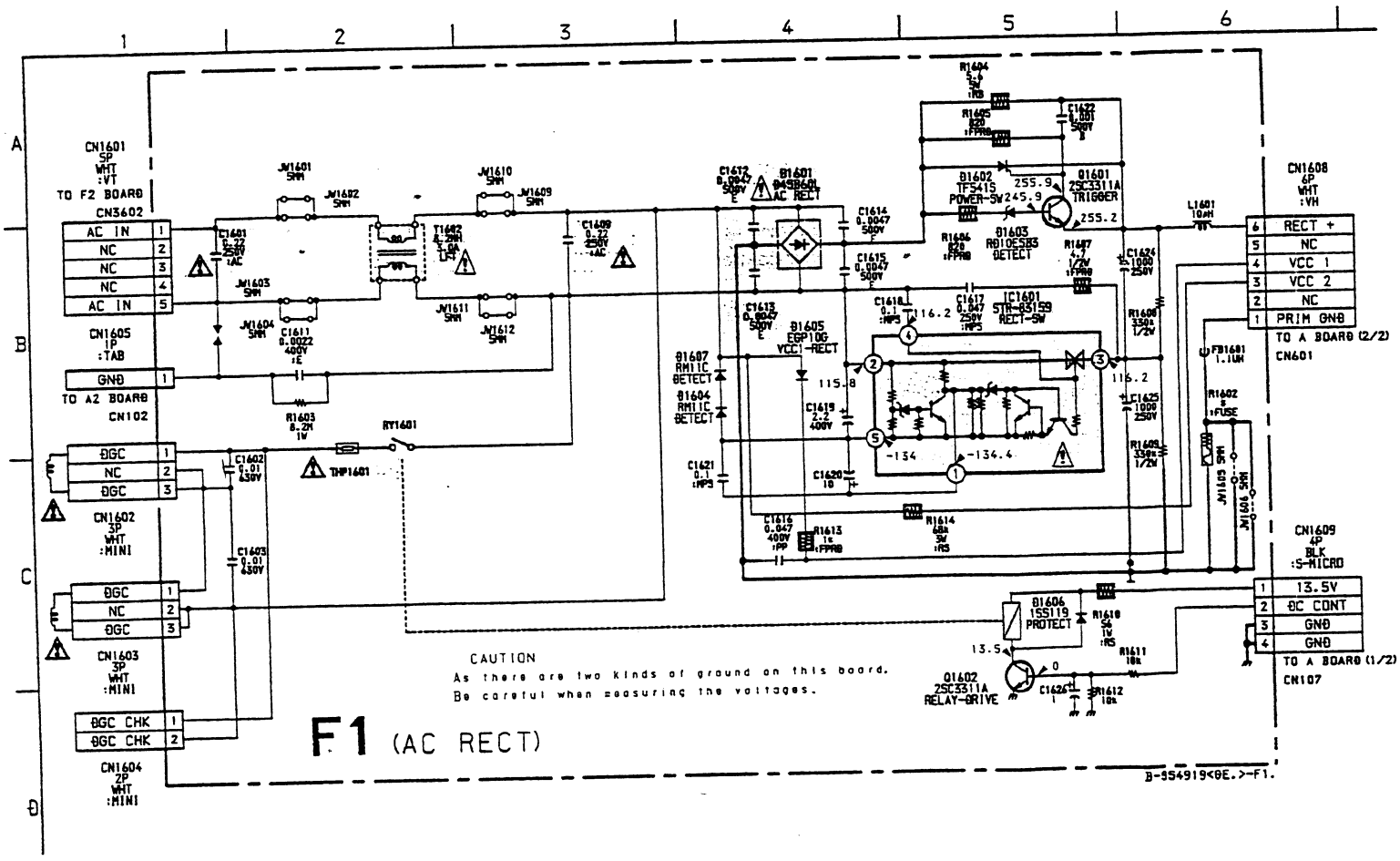
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

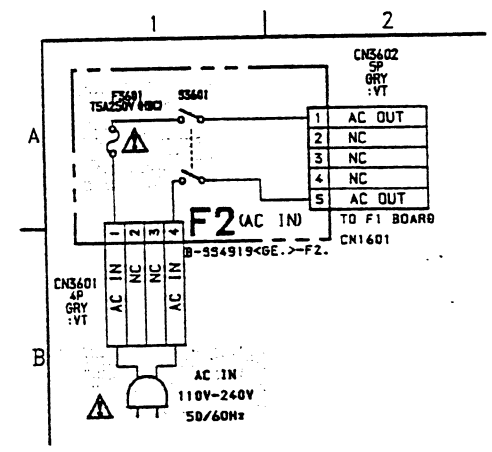
A BOARD

IC		Q309	A – 11	D303	D – 9
IC001	D – 6, D – 9	Q310	D – 11	D304	D – 12
IC002	E – 6	Q311	D – 11	D305	
IC003	E – 7	Q312	C – 11	D306	C – 11
IC004		Q601	F – 3	D307	C – 11
IC301	A – 12	Q602	F – 3	D308	E – 4
IC302	C – 5	Q603	F – 3	D309	C – 10
IC303	C – 11	Q604	F – 3	D310	C – 10
IC601	F – 2, F – 14	Q605	E – 1, E – 15	D311	C – 10
IC602	F – 2, F – 14	Q606	E – 3, E – 13	D601	F – 2, F – 14
IC650	A – 1, A – 15	Q607	E – 2, E – 14	D602	E – 2
IC651	E – 3, E – 13	Q608	E – 2, E – 14	D603	F – 2, F – 14
IC652	B – 2, B – 14	Q611	F – 3	D604	E – 2
IC1201	E – 5	Q612	E – 3, E – 13	D605	F – 14
IC1202	D – 5, D – 11	Q651	B – 15	D606	F – 2
IC2001	C – 6	Q652	B – 15	D607	E – 2
IC2002	C – 7, C – 9	Q653	A – 14	D608	E – 1
IC2601	C – 3, C – 13	Q1201	E – 10	D609	F – 3
IC2602	C – 4, C – 12	Q1202	E – 10	D610	F – 2, F – 13
IC2603	C – 3, C – 13	Q1203	E – 10	D611	F – 3, F – 13
		Q1204	E – 11	D612	E – 13
TRANSISTOR		Q1205	E – 11	D613	E – 2, E – 14
Q101	E – 9	Q1206	E – 11	D614	E – 3
Q203	F – 12	Q1207	D – 10	D615	F – 13
Q204	F – 12	Q1208	E – 11	D651	D – 13
Q301	A – 13	Q1209	E – 10	D652	C – 2, C – 14
Q302	C – 11	Q1210	F – 10	D654	C – 1, C – 15
Q303	C – 10	Q2006	C – 9	D655	C – 2, C – 14
Q304	C – 11	DIODE		D656	A – 15
Q305	A – 12	D009	E – 9	D657	D – 13
Q306	A – 12	D010	E – 9		
Q307	E – 4	D011	E – 7		
Q308	E – 4	D012	E – 9		
		D201	F – 12		
		D202	F – 4		
		D203	F – 12		
		D204	F – 12		
		D301	C – 12		
		D302	D – 10		





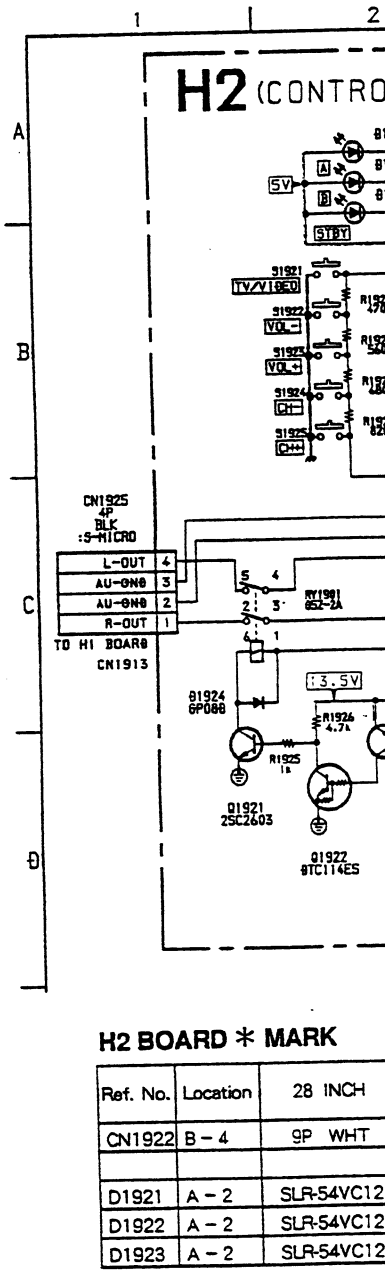




A2 BOARD * MARK

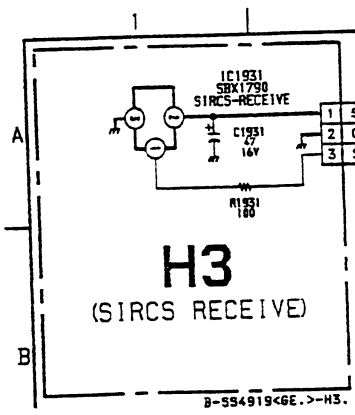
Ref. No.	Location	28 INCH	32 INCH
C107	B-3	-	470p
C108	B-3	-	22
C110	B-4	-	47 16V
C111	B-4	-	470p
C113	B-4	-	47
C114	B-4	-	470p
C116	B-4	-	47 16V
C121	B-5	-	47 16V
C122	B-5	-	470p
IF102	A-5	-	IFD380A
L103	B-3	-	47 µH
L104	B-3	-	47 µH
L105	B-3	-	47 µH
R109	B-4	-	220
R110	B-4	-	220
R111	B-4	-	10k
R117	B-4	-	22k
TP102	B-3	-	○
TU102	A-3	-	BTP-RG421

○:TO BE MOUNT
-: NOT MOUNT



H2 BOARD * MARK

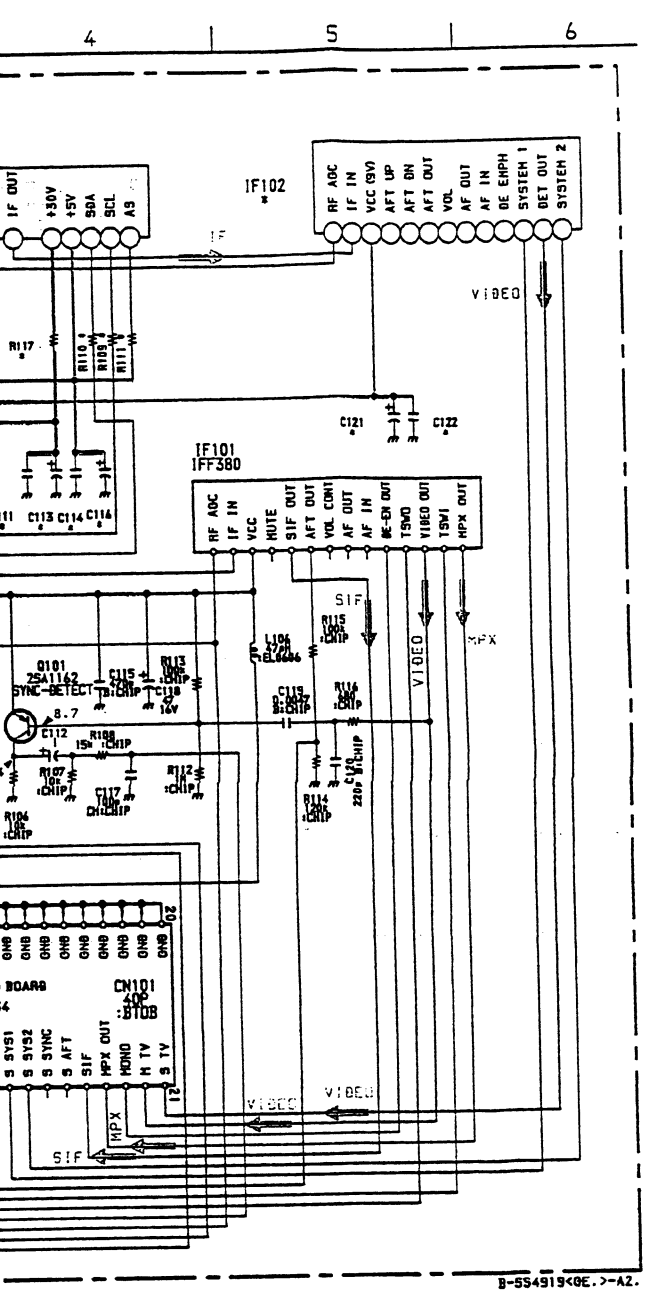
Ref. No.	Location	28 INCH
CN1922	B-4	9P WHT
D1921	A-2	SLR-54VC12
D1922	A-2	SLR-54VC12
D1923	A-2	SLR-54VC12

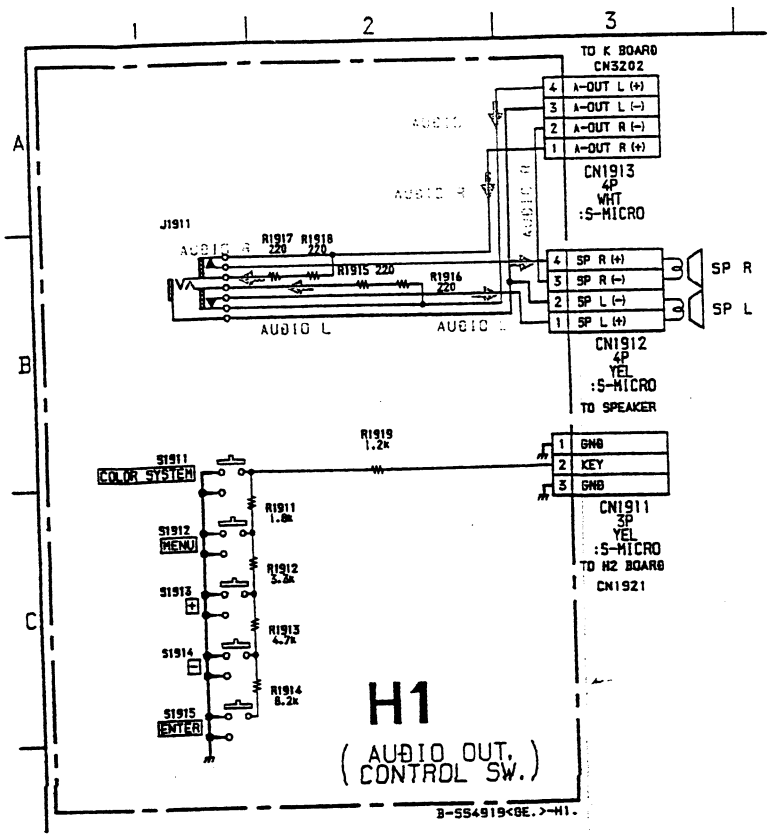


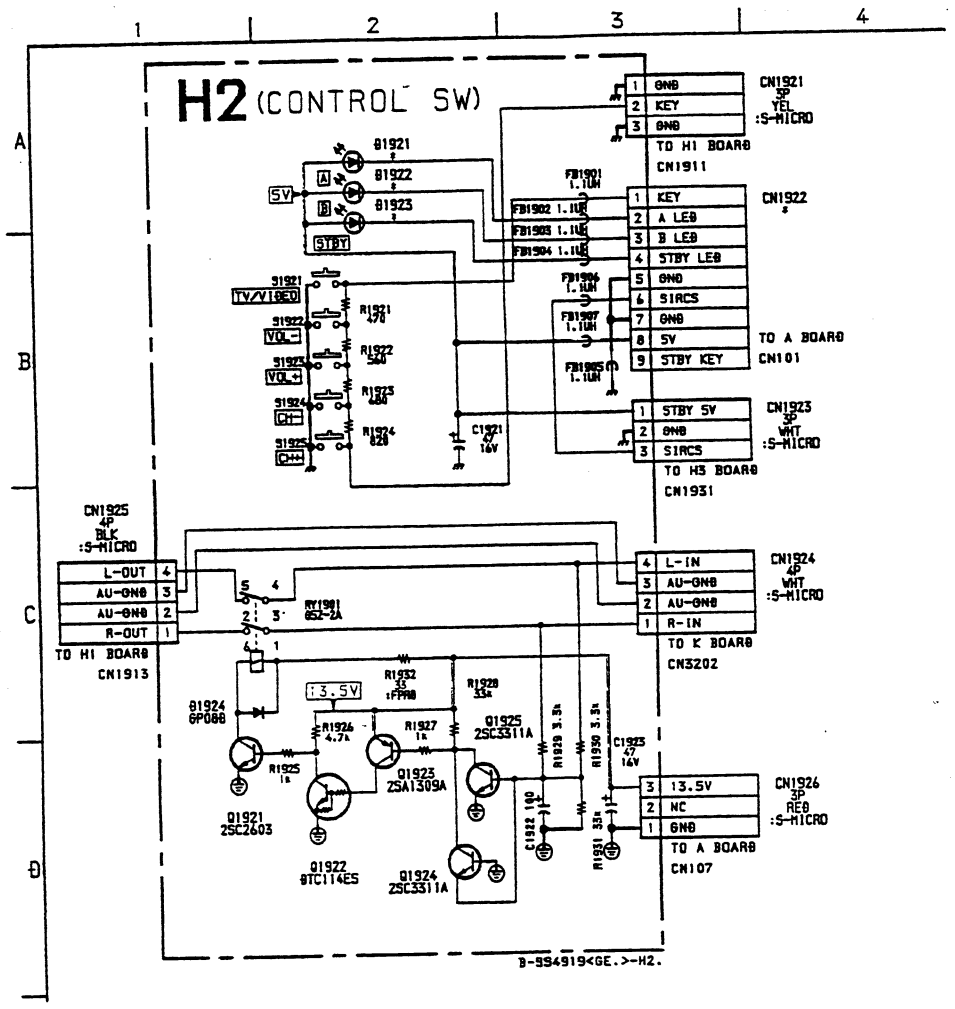
A2 BOARD * MARK

Ref. No.	Location	28 INCH	32 INCH
C107	B-3	-	470p
C108	B-3	-	22
C110	B-4	-	47 16V
C111	B-4	-	470p
C113	B-4	-	47
C114	B-4	-	470p
C116	B-4	-	47 16V
C121	B-5	-	47 16V
C122	B-5	-	470p
IF102	A-5	-	IFD380A
L103	B-3	-	47 µH
L104	B-3	-	47 µH
L105	B-3	-	47 µH
R109	B-4	-	220
R110	B-4	-	220
R111	B-4	-	10k
R117	B-4	-	22k
TP102	B-3	-	O
TU102	A-3	-	BTP-RG421

O:TO BE MOUNT
-: NOT MOUNT



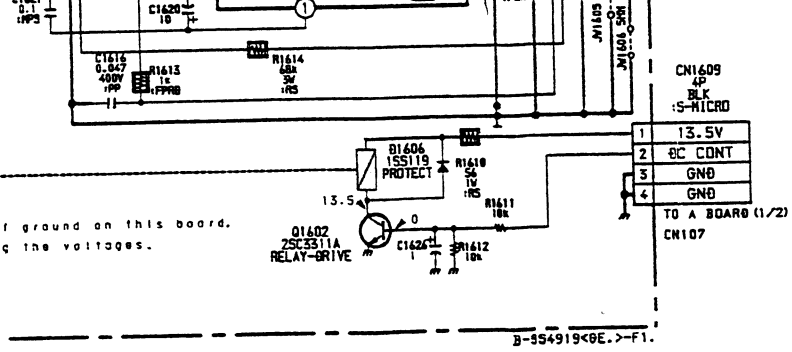


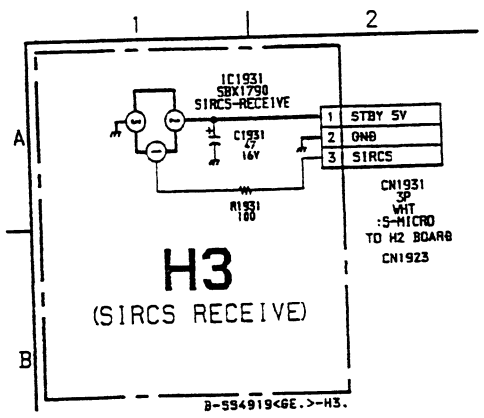


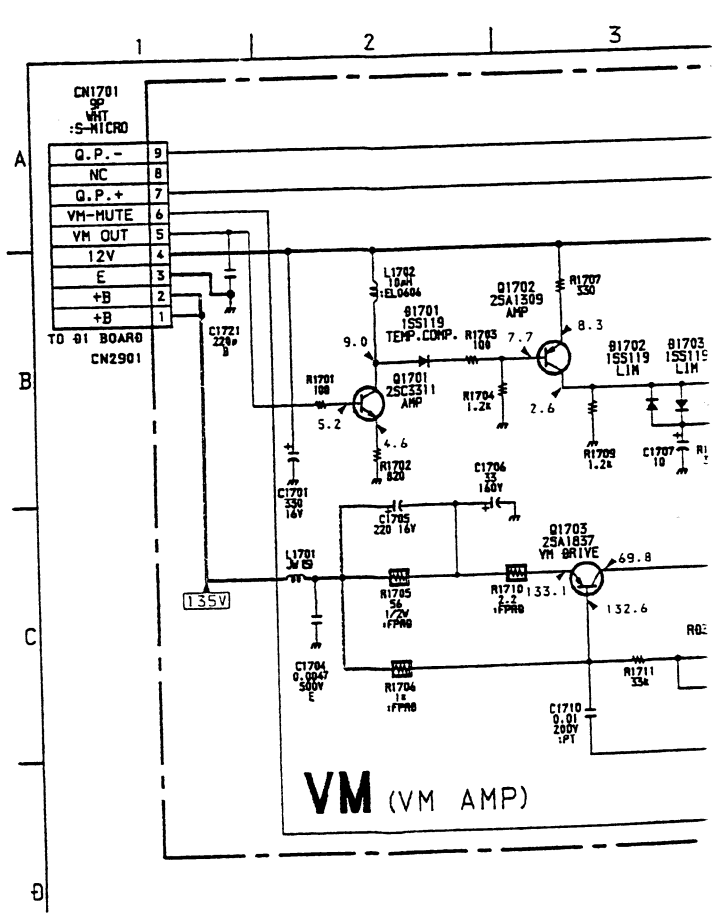
H2 BOARD * MARK

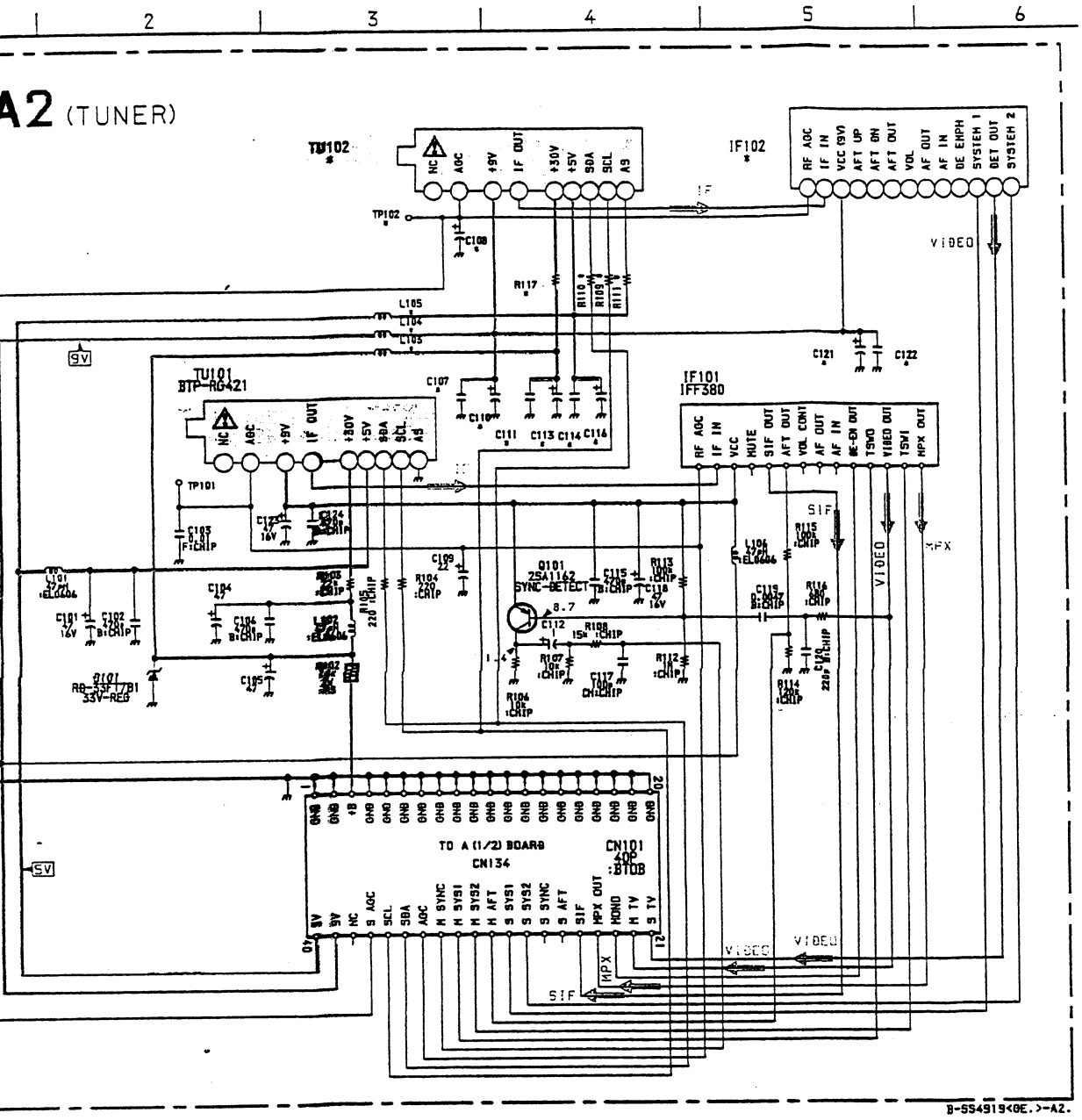
Ref. No.	Location	28 INCH	32 INCH
CN1922	B-4	9P WHT	9P WHT-L
D1921	A-2	SLR-54VC12	SEL1222R-C, D
D1922	A-2	SLR-54VC12	SEL1222R-C, D
D1923	A-2	SLR-54VC12	SEL1222R-C, D

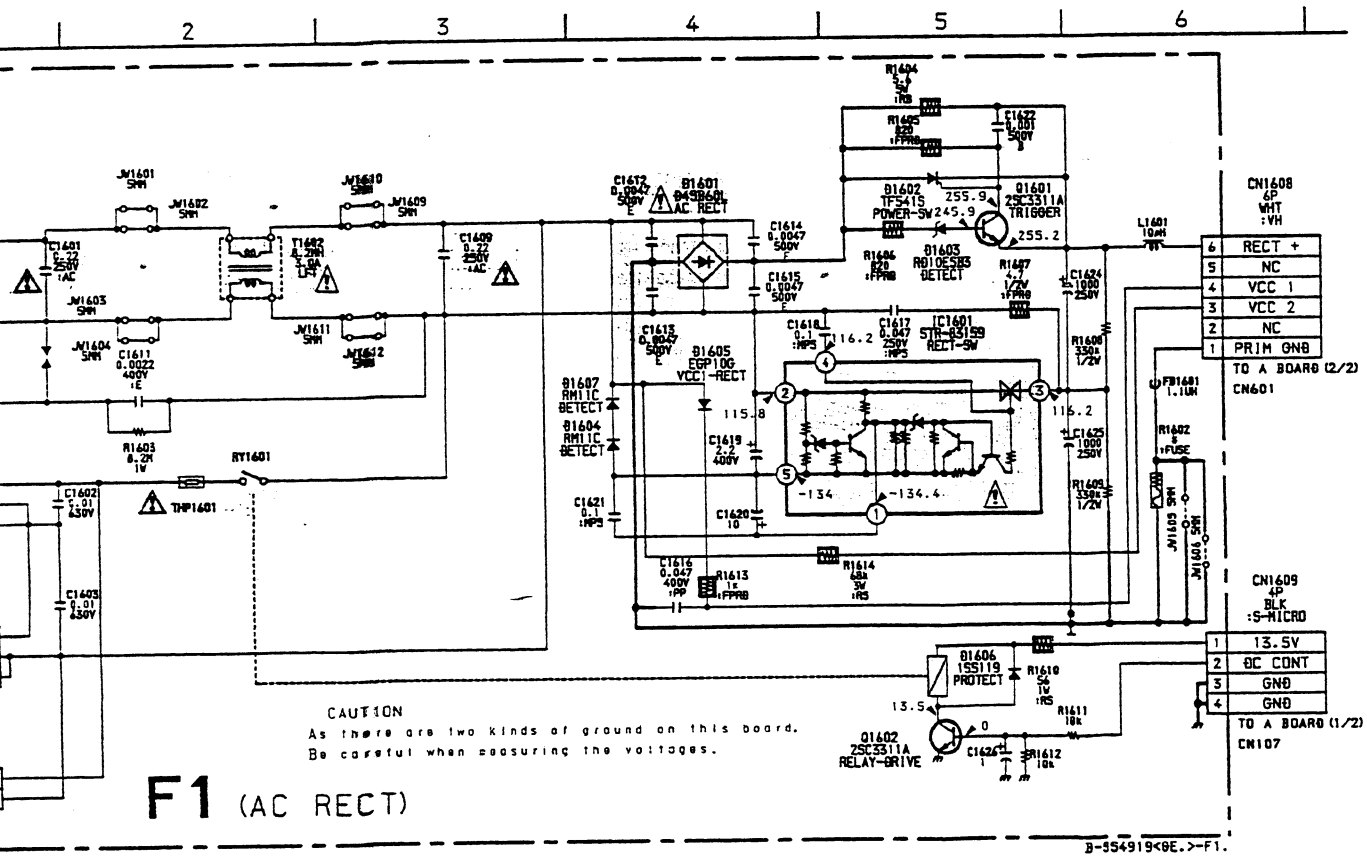
O:TO BE MOUNT
-: NOT MOUNT

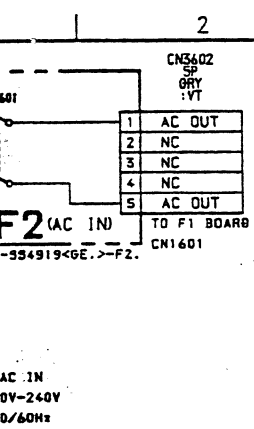








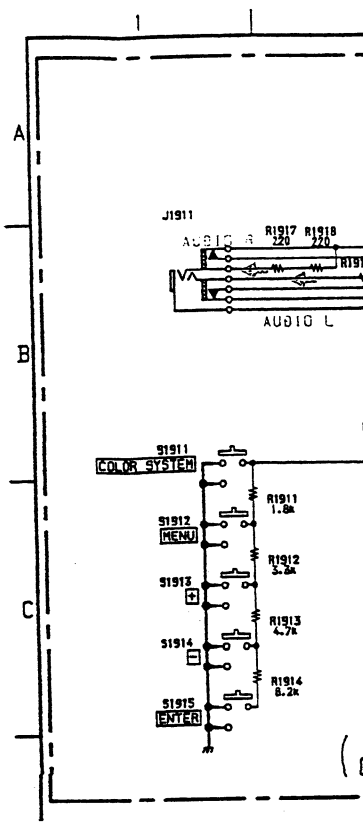


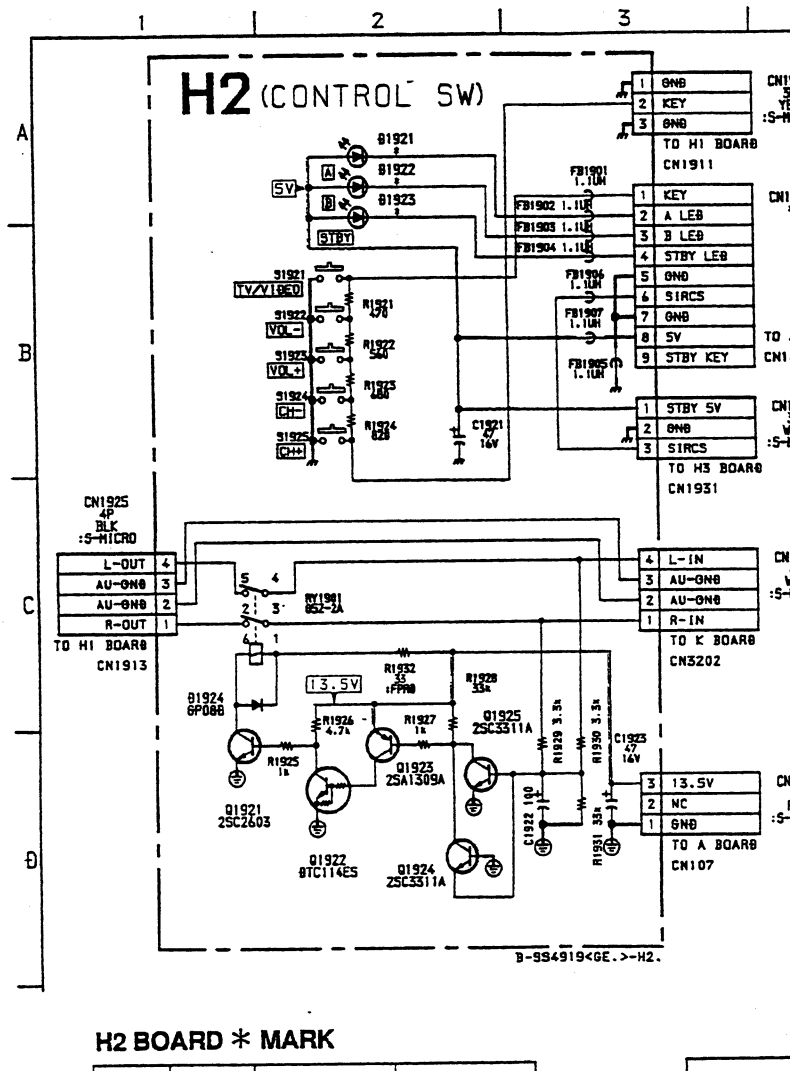


A2 BOARD * MARK

Ref. No.	Location	28 INCH	32 INCH
C107	B-3	-	470p
C108	B-3	-	22
C110	B-4	-	47 16V
C111	B-4	-	470p
C113	B-4	-	47
C114	B-4	-	470p
C116	B-4	-	47 16V
C121	B-5	-	47 16V
C122	B-5	-	470p
IF102	A-5	-	IFD380A
L103	B-3	-	47 µH
L104	B-3	-	47 µH
L105	B-3	-	47 µH
R109	B-4	-	220
R110	B-4	-	220
R111	B-4	-	10k
R117	B-4	-	22k
TP102	B-3	-	○
TU102	A-3	-	BTP-RG421

○:TO BE MOUNT
-: NOT MOUNT

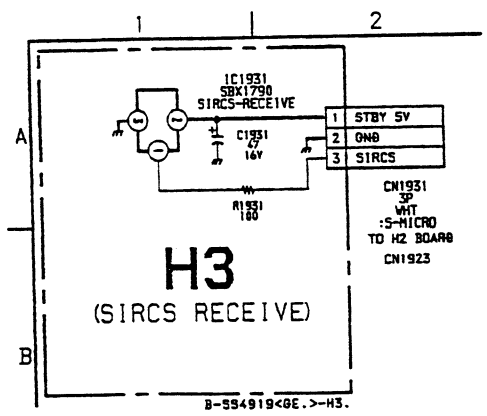


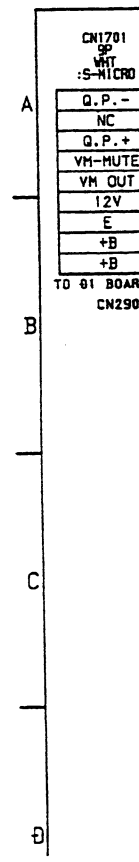


H2 BOARD * MARK

Ref. No.	Location	28 INCH	32 INCH
CN1922	B-4	9P WHT	9P WHT-L
D1921	A-2	SLR-54VC12	SEL1222R-C, D
D1922	A-2	SLR-54VC12	SEL1222R-C, D
D1923	A-2	SLR-54VC12	SEL1222R-C, D

○:TO BE MOUNT
-: NOT MOUNT



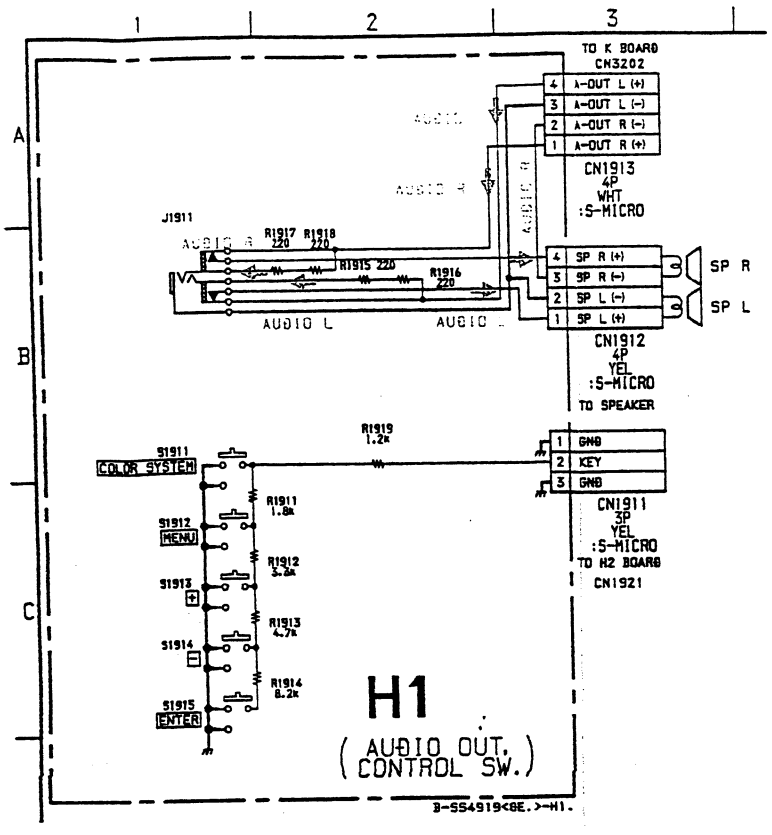


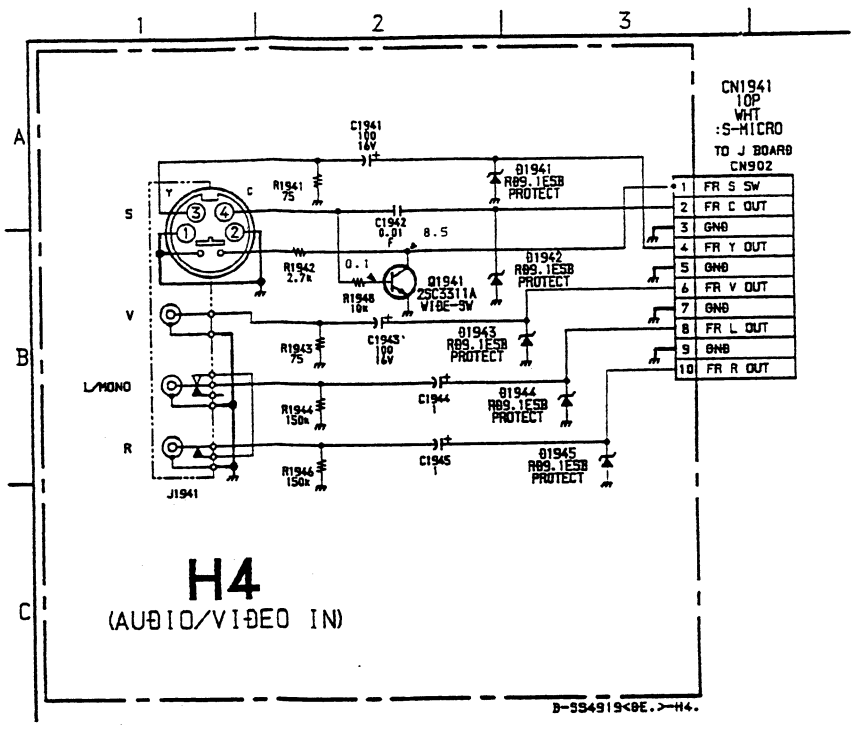
* MARK

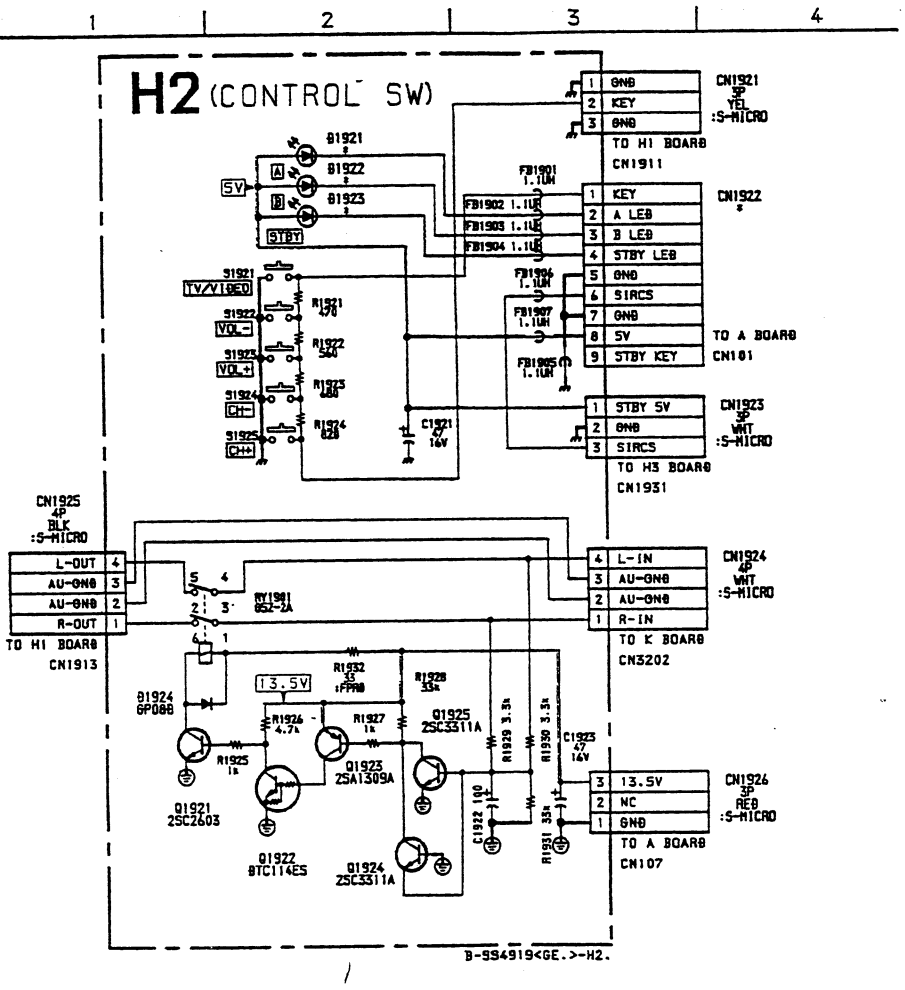
on	28 INCH	32 INCH
	-	470p
	-	22
	-	47 16V
	-	470p
	-	47
	-	470p
	-	47 16V
	-	47 16V
	-	470p
	-	IFD380A
	-	47 µH
	-	47 µH
	-	47 µH
	-	220
	-	220
	-	10k
	-	22k
	-	○
	-	BTP-RG421

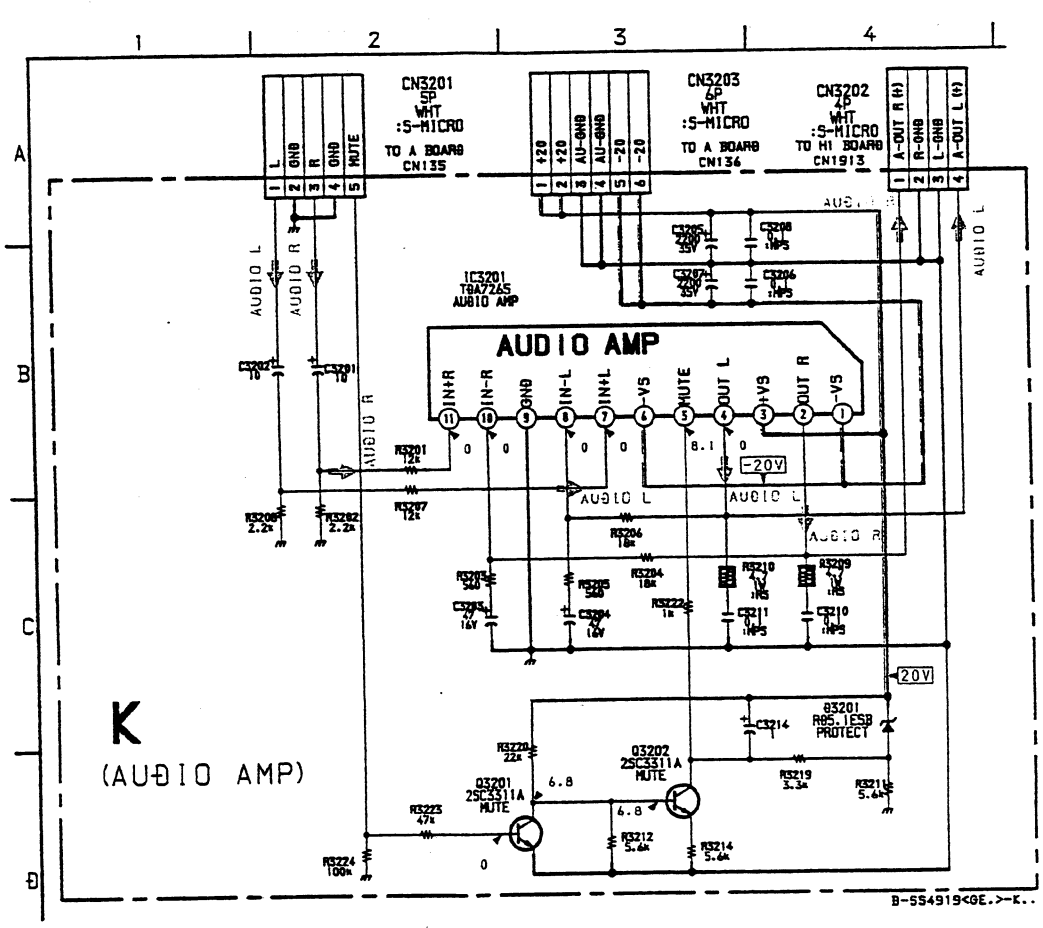
○:TO BE MOUNT

-: NOT MOUNT







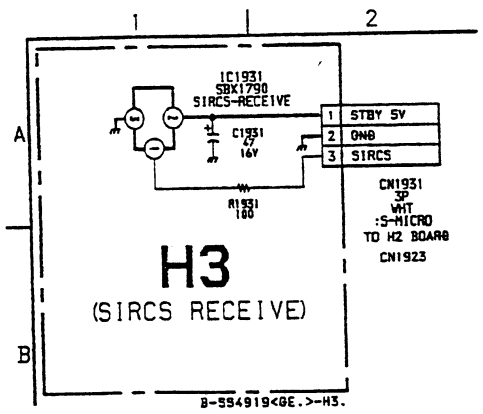


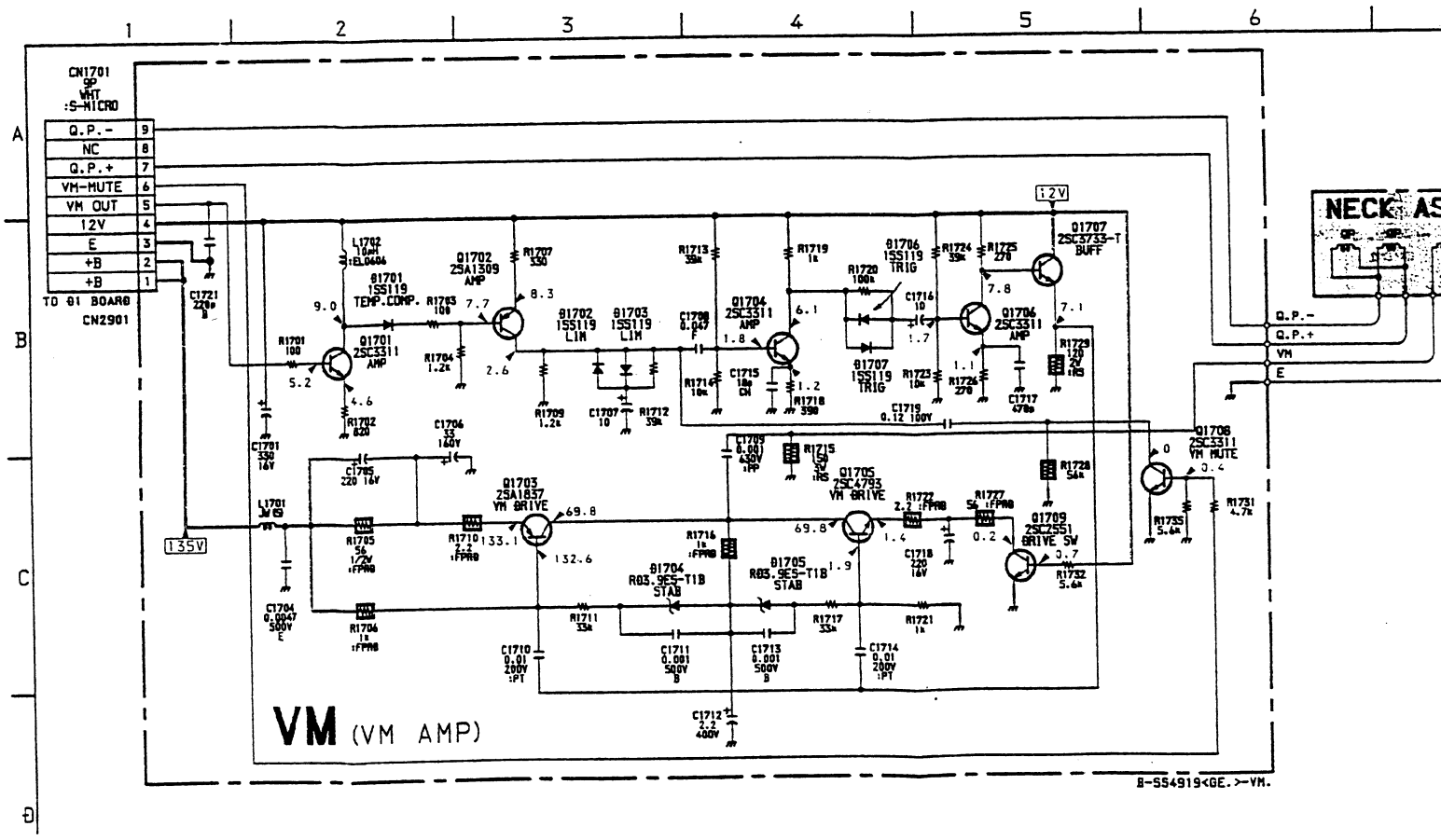
H2 BOARD * MARK

Ref. No.	Location	28 INCH	32 INCH
CN1922	B - 4	9P WHT	9P WHT-L
D1921	A - 2	SLR-54VC12	SEL1222R-C, D
D1922	A - 2	SLR-54VC12	SEL1222R-C, D
D1923	A - 2	SLR-54VC12	SEL1222R-C, D

○:TO BE MOUNT

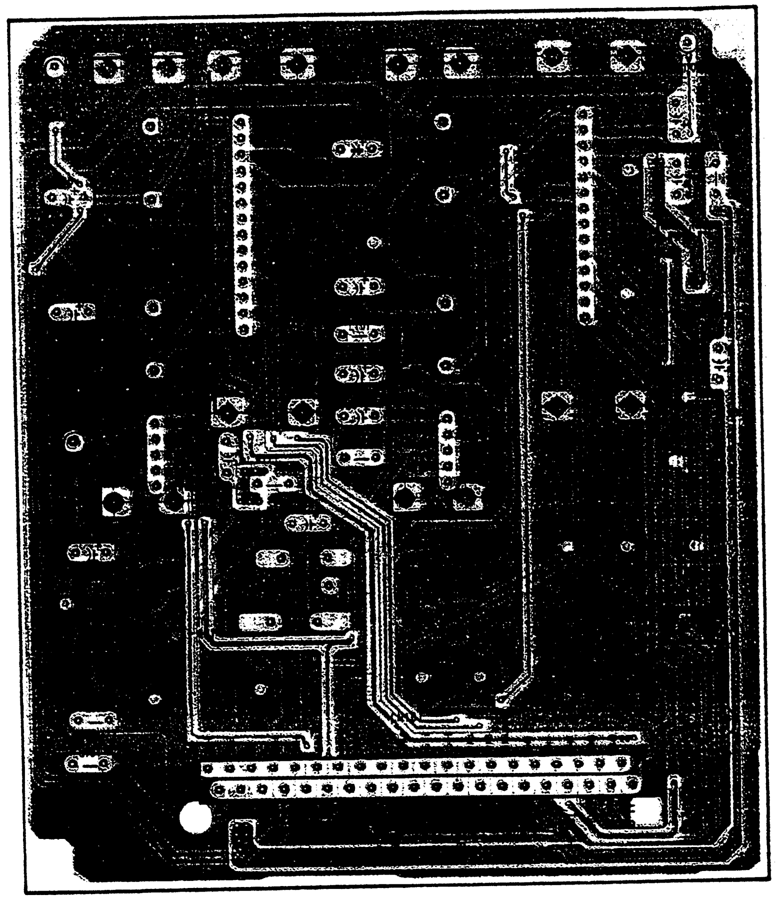
-: NOT MOUNT





A2 [TUNER] **F1** [AC RECT] **F2** [AC IN] **H1** [AUDIO OUT, CONTROL SW] **H2** [CONTROL SW] **H3** [SIRCS RECEIVE] **H4** [AUDIO/VIDEO IN] **K** [AUDIO AMP] **VM** [VM AMP]

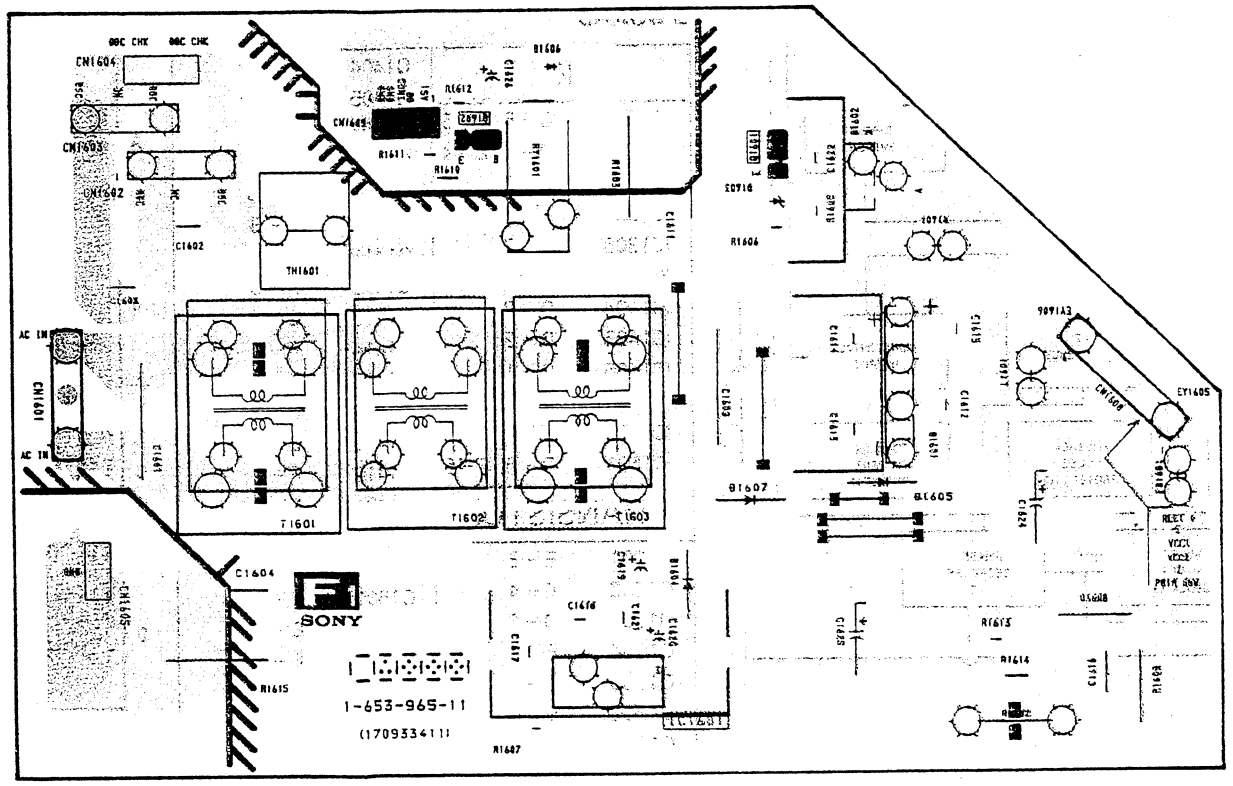
– A2 BOARD –



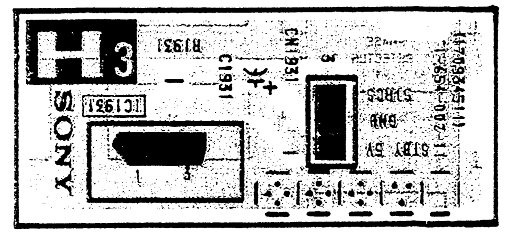
Note :

- ▒ : Pattern from the side which enables seeing.
- ■ : Pattern of the rear side.

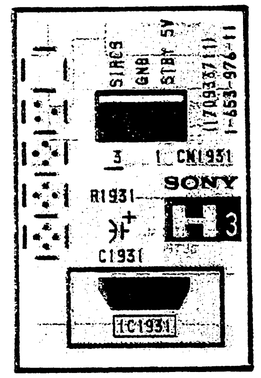
– F1 BOARD –

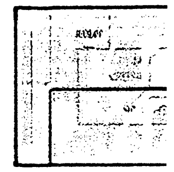


– H3 BOARD – (KV-W28MH11 / W28MN11)

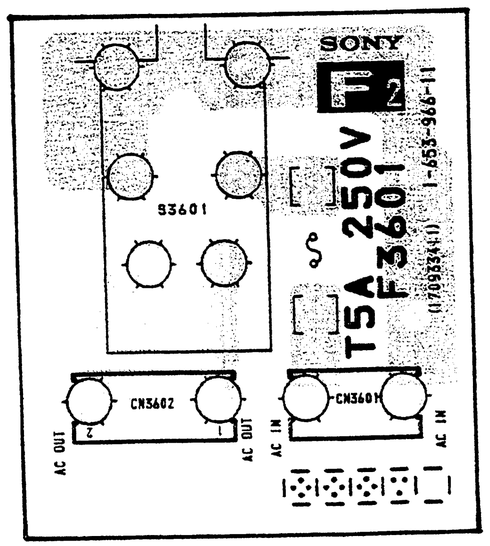


– H3 BOARD – (KV-W32MH11 / W32MN11)

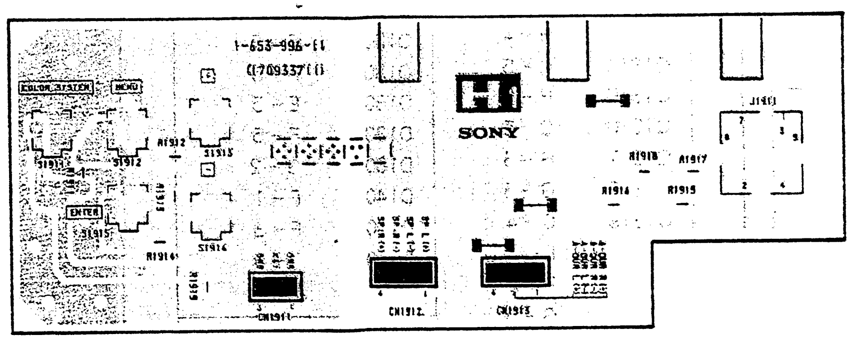




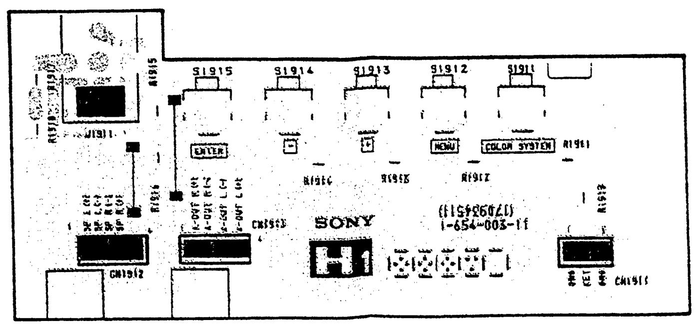
– F2 BOARD –



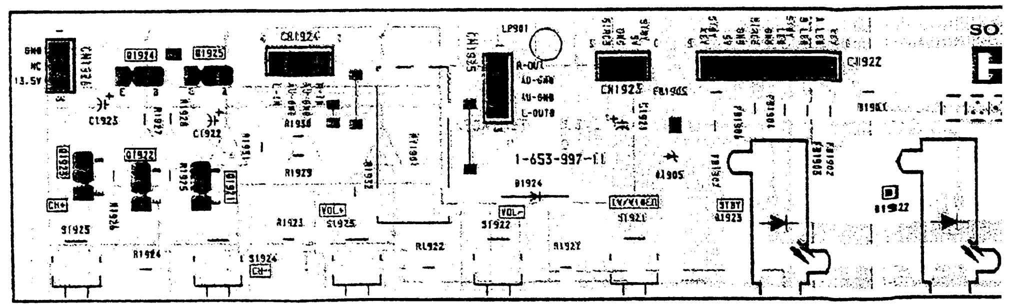
– H1 BOARD – (KV-W28MH11 / W28MN11)



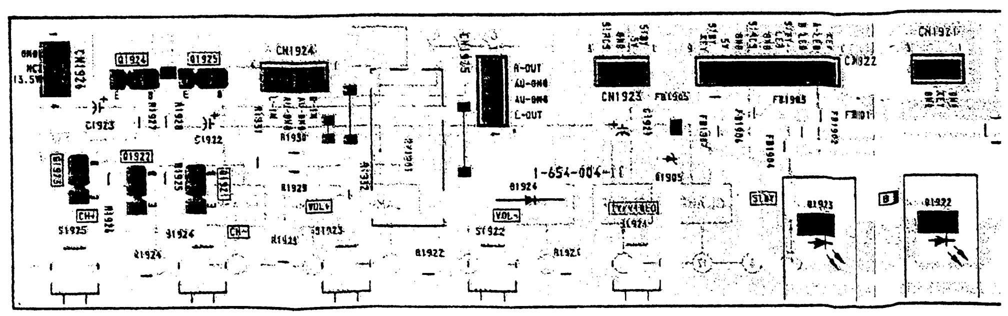
– H1 BOARD – (KV-W32MH11 / W32MN11)



– H2 BOARD – (KV-W28MH11 / W28MN11)

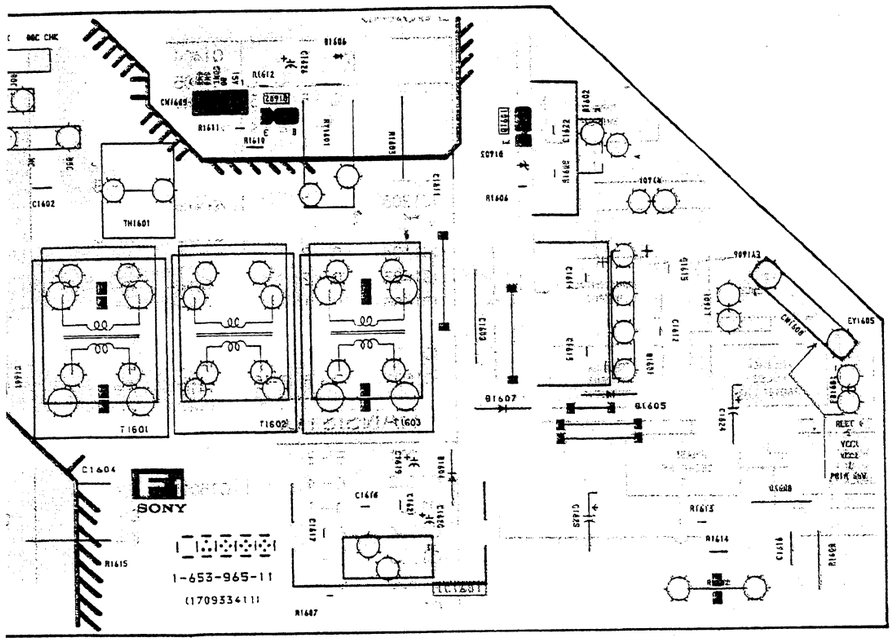


– H2 BOARD – (KV-W32MH11 / W32MN11)

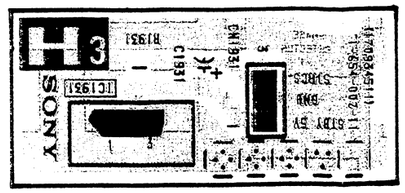


2 [CONTROL SW] **H3** [SIRCS RECEIVE] **H4** [AUDIO/VIDEO IN] **K** [AUDIO AMP] **VM** [VM AMP]

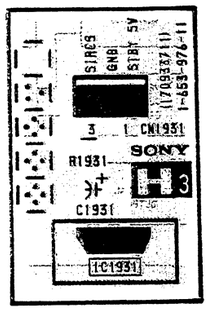
) –



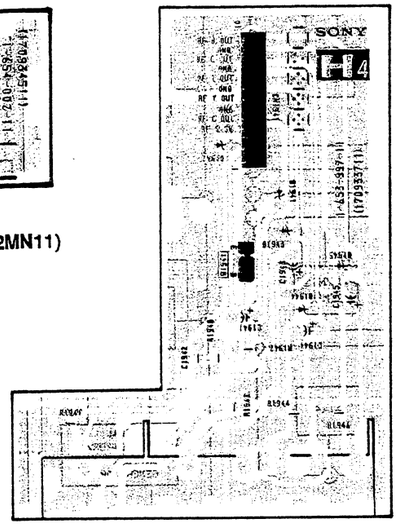
– H3 BOARD – (KV-W28MH11 / W28MN11)



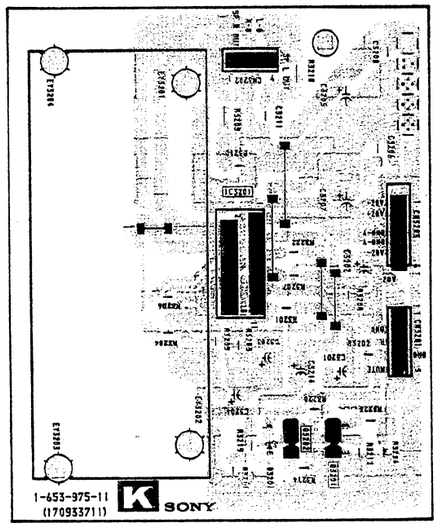
– H3 BOARD – (KV-W32MH11 / W32MN11)



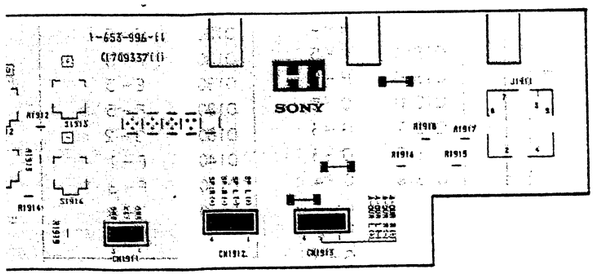
– H4 BOARD –



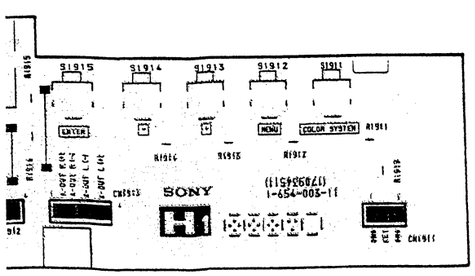
– K BOARD –



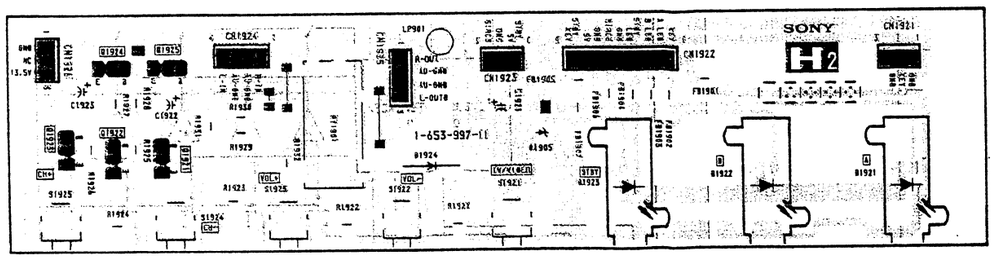
RD – (KV-W28MH11 / W28MN11)



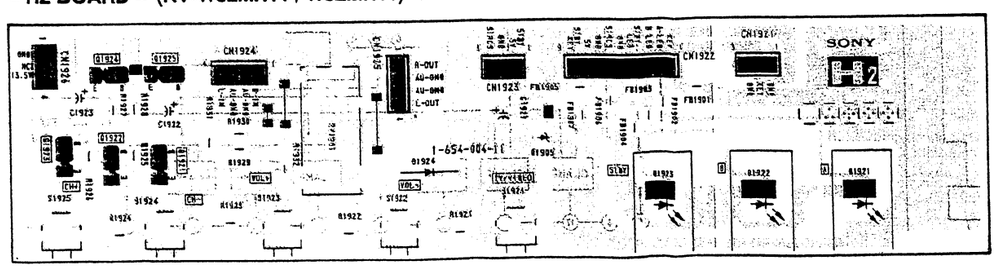
RD – (KV-W32MH11 / W32MN11)



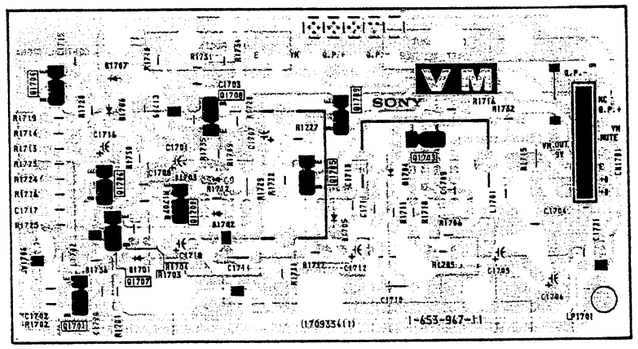
– H2 BOARD – (KV-W28MH11 / W28MN11)



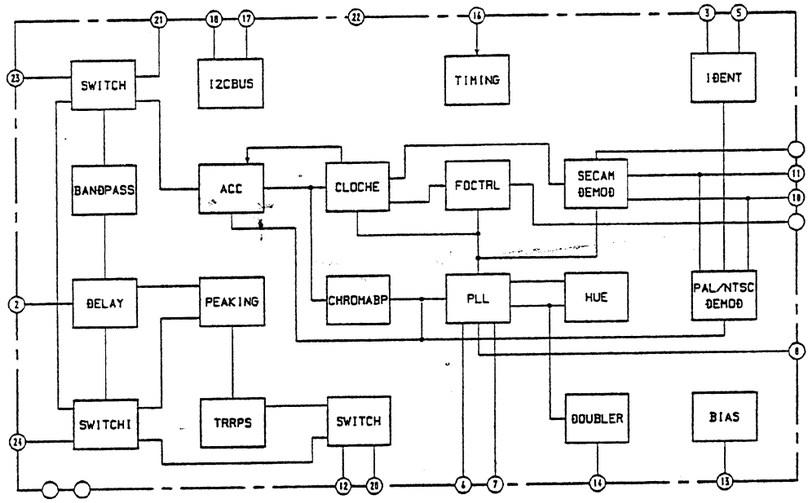
– H2 BOARD – (KV-W32MH11 / W32MN11)



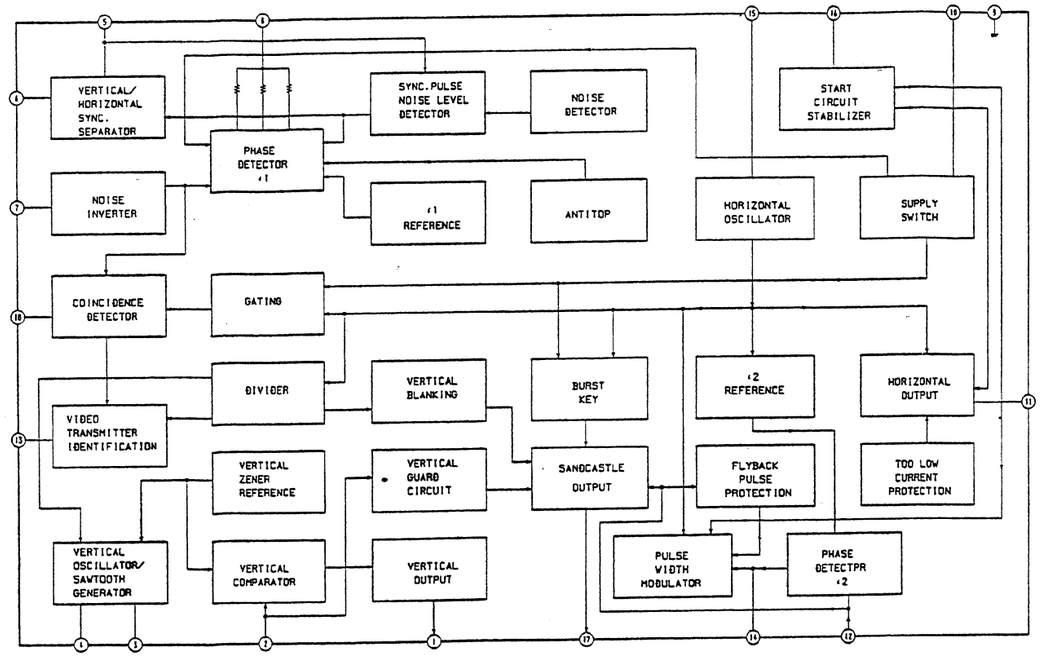
– VM BOARD –



B BOARD IC1302 TDA9145/N2B



B BOARD IC1501 TDA2579B



B BOARD

IC

IC1301	C – 5, F – 5
IC1302	D – 4, E – 4
IC1303	B – 4
IC1304	B – 5
IC1305	B – 2
IC1401	B – 3, G – 3
IC1404	D – 2
IC1405	D – 2
IC1406	D – 1
IC1407	B – 2, G – 2
IC1408	B – 1, G – 1
IC1501	D – 6, E – 6

TRANSISTOR

Q1301	E – 3
Q1302	E – 4
Q1303	D – 3
Q1304	E – 3
Q1305	C – 4
Q1306	D – 5
Q1307	F – 5
Q1308	C – 5
Q1309	G – 6
Q1310	G – 5
Q1311	G – 5
Q1312	H – 4
Q1314	H – 5
Q1315	H – 5
Q1316	G – 5
Q1317	G – 6
Q1318	G – 5
Q1319	C – 4
Q1320	E – 4
Q1323	F – 2
Q1324	G – 5
Q1325	G – 5
Q1401	F – 3
Q1402	C – 3
Q1403	G – 3
Q1404	G – 3
Q1405	F – 3
Q1407	E – 3
Q1408	D – 3
Q1409	D – 3
Q1410	F – 3
Q1411	G – 2
Q1412	F – 3
Q1413	G – 2
Q1414	F – 1
Q1415	C – 1
Q1416	C – 1
Q1417	E – 1
Q1418	F – 1
Q1421	F – 3
Q1422	C – 2
Q1423	C – 1
Q1501	F – 6
Q1502	C – 5
Q1505	E – 6
Q1506	E – 6
Q1507	F – 5
Q1508	E – 6

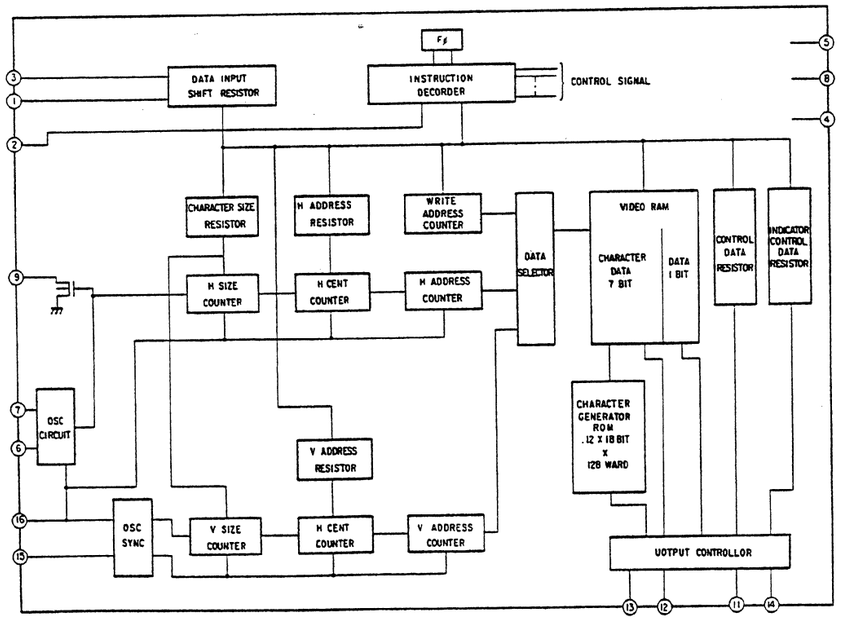
DIODE

D1301	B – 4
D1302	E – 4
D1303	E – 5
D1304	F – 5
D1305	E – 5
D1307	F – 5
D1309	G – 2
D1401	F – 1
D1402	F – 3
D1501	F – 4
D1502	F – 4

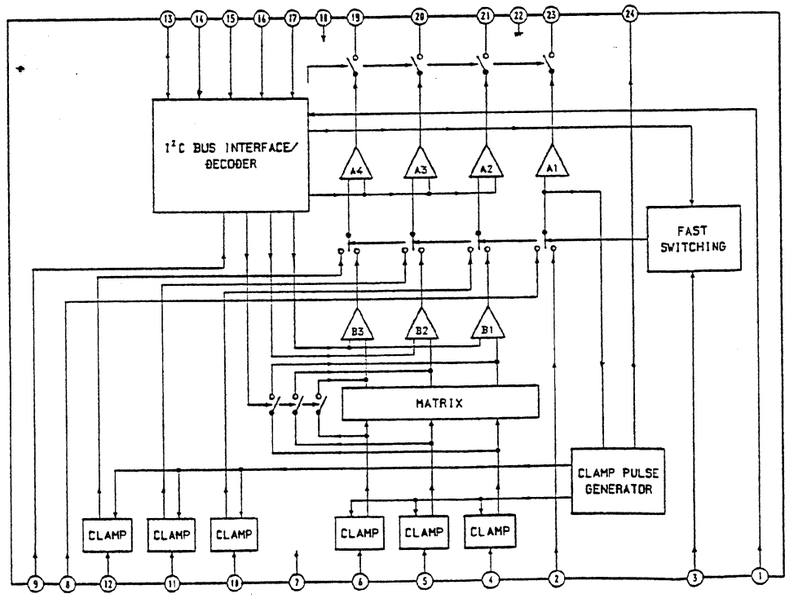
VARIABLE RESISTOR

RV1501	D – 5

B BOARD IC1305 μPD6456

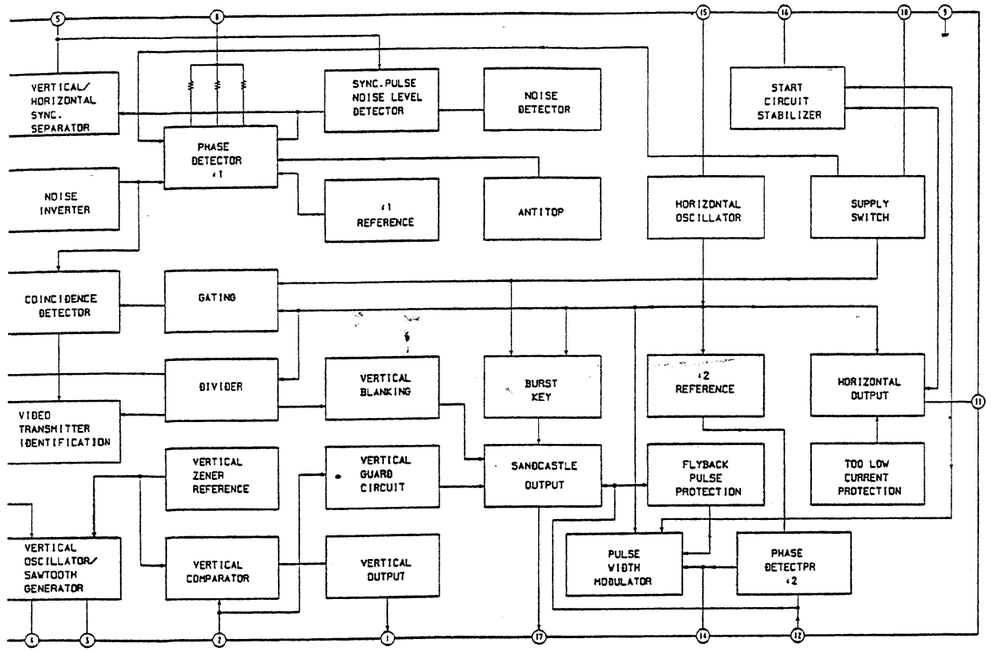


B BOARD IC1401 TDA8443B

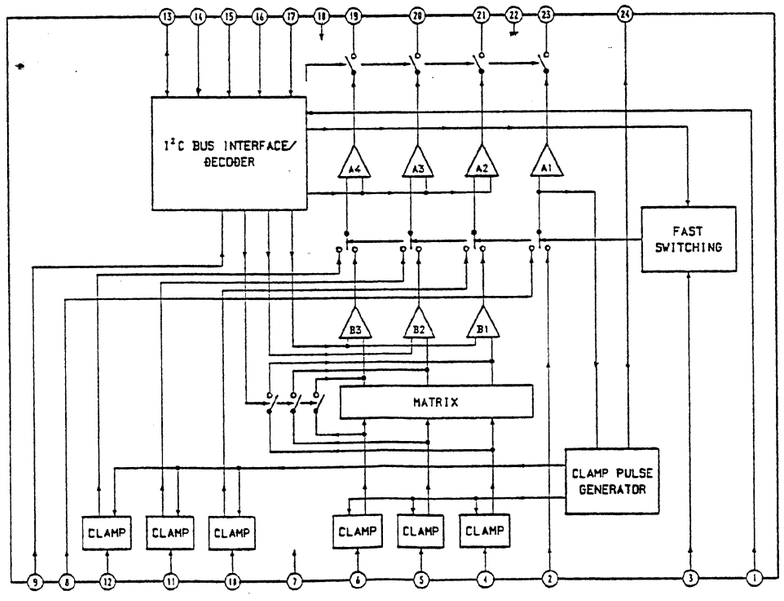


B [CHROMA DECORDER, 1H DELAY, P IN P, 3D-Y/C-SEP, R. G. B SW.]

BOARD IC1501 TDA2579B



B BOARD IC1401 TDA8443B



B BOARD

IC

IC1301	C – 5, F – 5
IC1302	D – 4, E – 4
IC1303	B – 4
IC1304	B – 5
IC1305	B – 2
IC1401	B – 3, G – 3
IC1404	D – 2
IC1405	D – 2
IC1406	D – 1
IC1407	B – 2, G – 2
IC1408	B – 1, G – 1
IC1501	D – 6, E – 6

TRANSISTOR

Q1301	E – 3
Q1302	E – 4
Q1303	D – 3
Q1304	E – 3
Q1305	C – 4
Q1306	D – 5
Q1307	F – 5
Q1308	C – 5
Q1309	G – 6
Q1310	G – 5
Q1311	G – 5
Q1312	H – 4
Q1314	H – 5
Q1315	H – 5
Q1316	G – 5
Q1317	G – 6
Q1318	G – 5
Q1319	C – 4
Q1320	E – 4
Q1323	F – 2
Q1324	G – 5
Q1325	G – 5
Q1401	F – 3
Q1402	C – 3
Q1403	G – 3
Q1404	G – 3
Q1405	F – 3
Q1407	E – 3
Q1408	D – 3
Q1409	D – 3
Q1410	F – 3
Q1411	G – 2
Q1412	F – 3
Q1413	G – 2
Q1414	F – 1
Q1415	C – 1
Q1416	C – 1
Q1417	E – 1
Q1418	F – 1
Q1421	F – 3
Q1422	C – 2
Q1423	C – 1
Q1501	F – 6
Q1502	C – 5
Q1505	E – 6
Q1506	E – 6
Q1507	F – 5
Q1508	E – 6

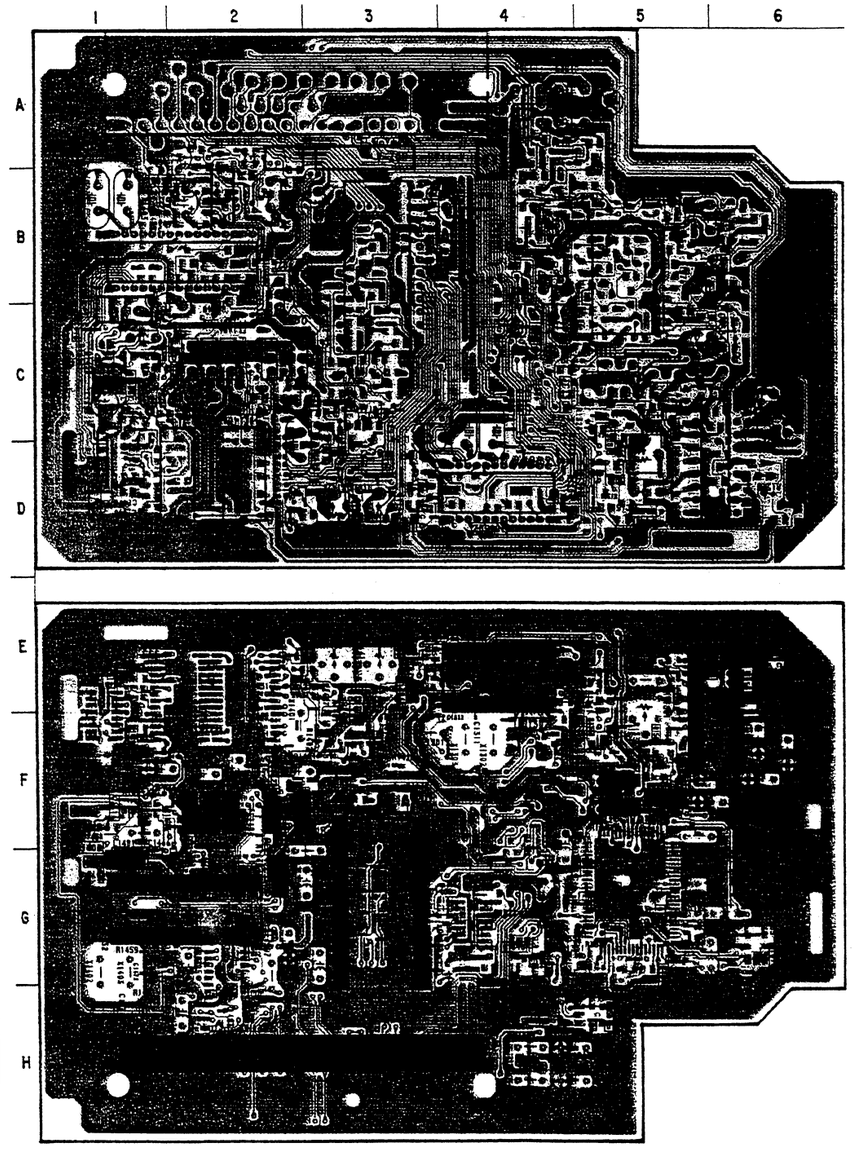
DIODE

D1301	B – 4
D1302	E – 4
D1303	E – 5
D1304	F – 5
D1305	E – 5
D1307	F – 5
D1309	G – 2
D1401	F – 1
D1402	F – 3
D1501	F – 4
D1502	F – 4

VARIABLE RESISTOR

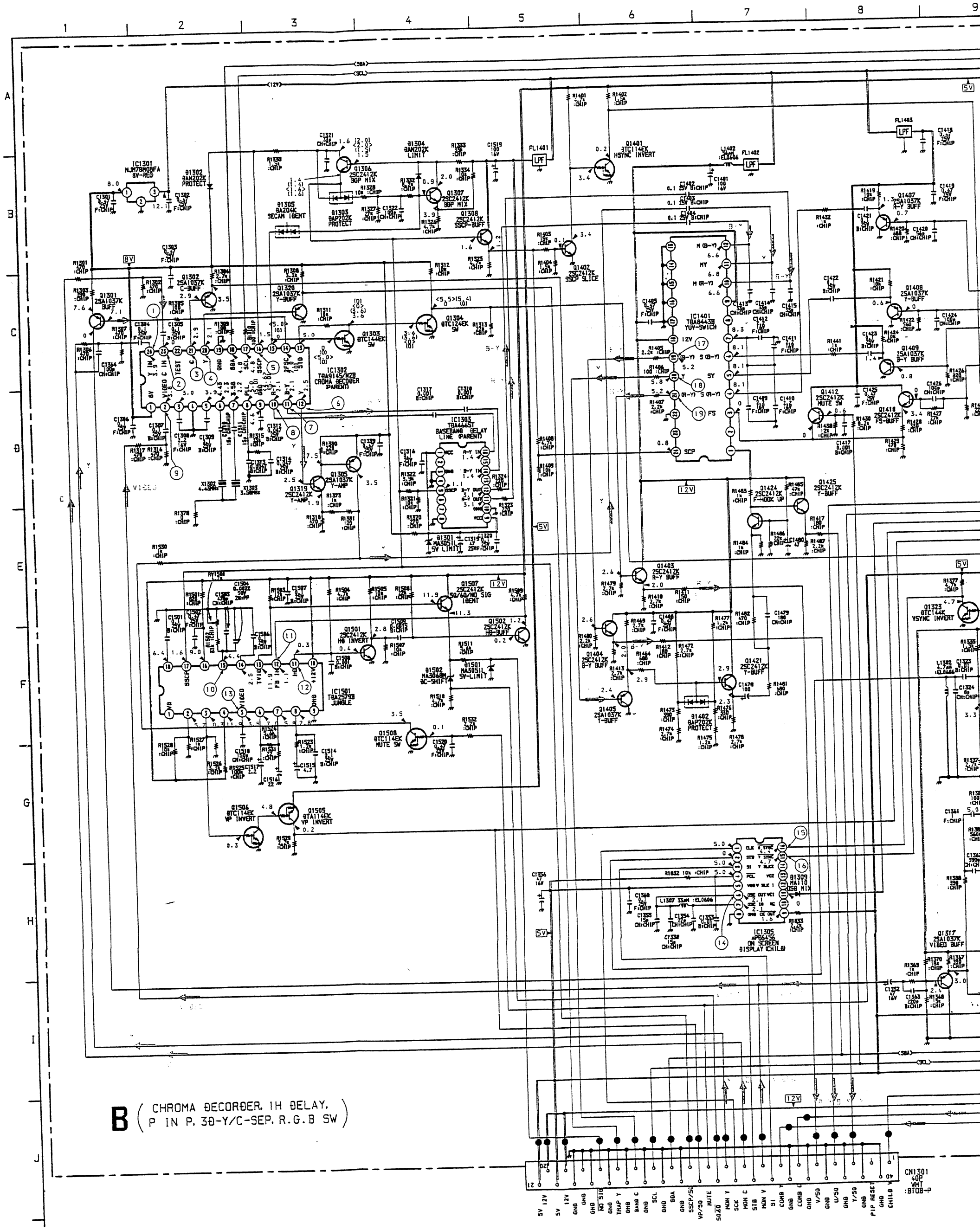
RV1501	D – 5

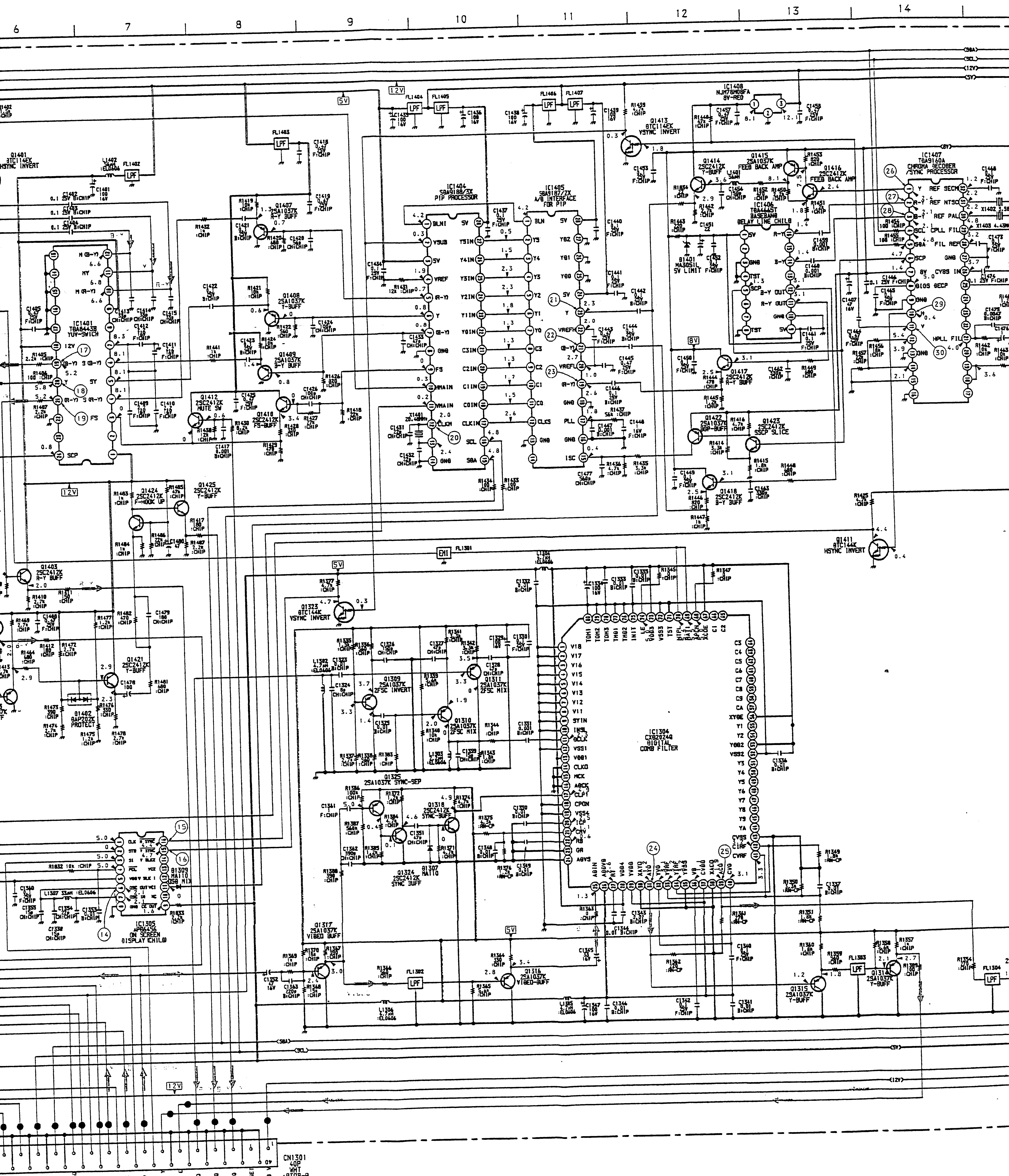
– B BOARD –

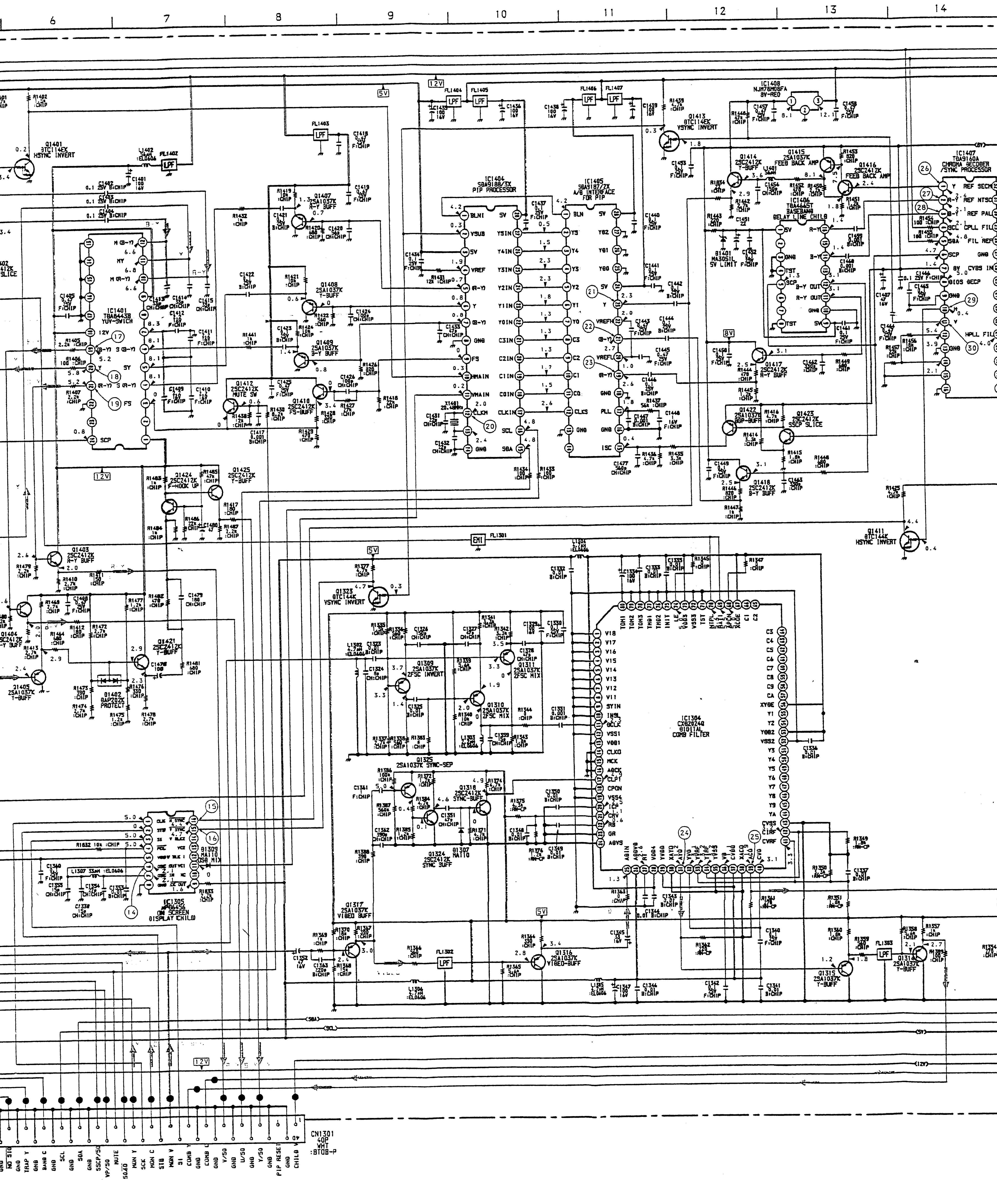


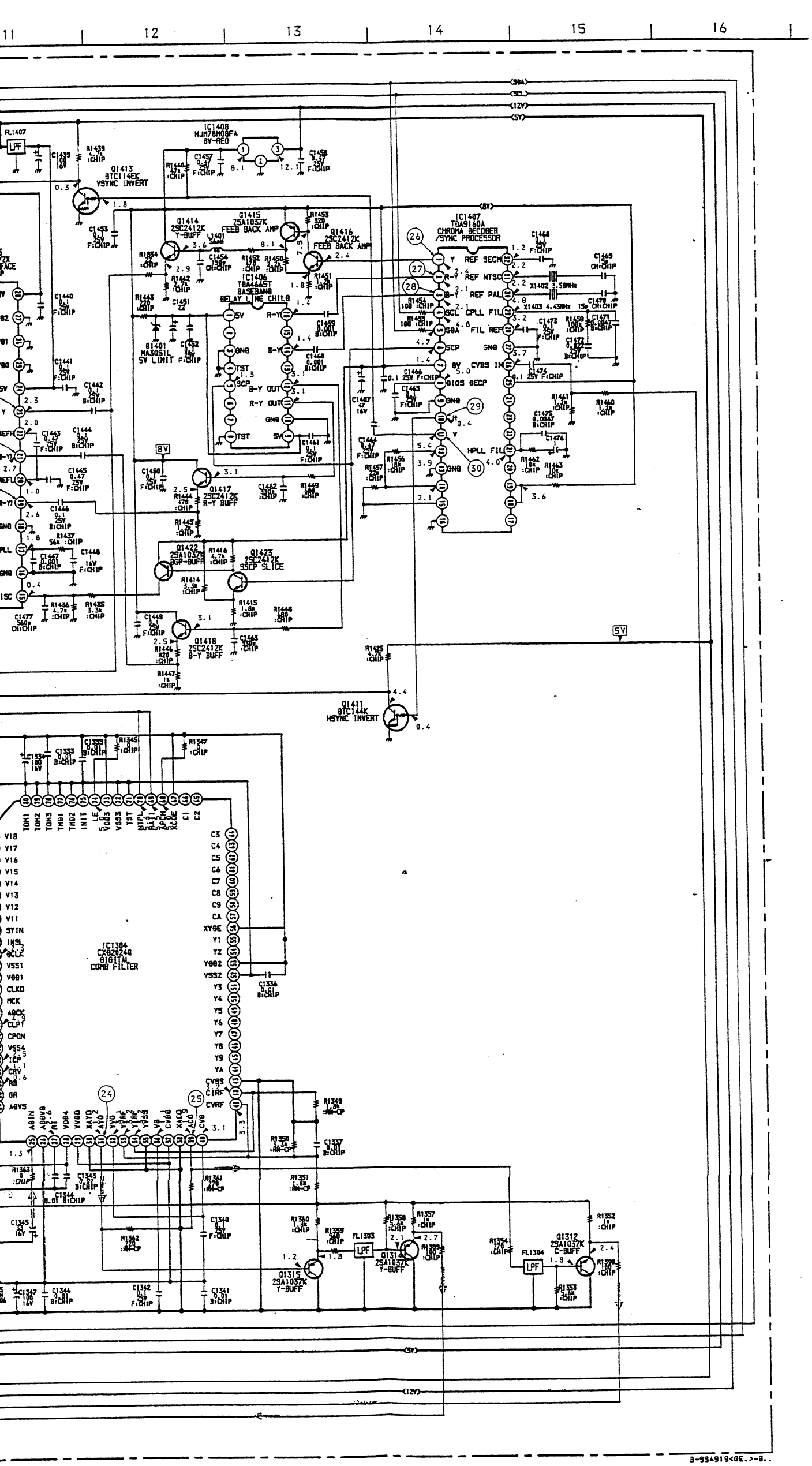
Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.


B (CHROMA DECORDER, 1H DELAY, P IN P, 3D-Y/C-SEP, R.G.B SW)
IC1301 NJM78M08FA 8V-REG
Q1301 2SA1037K BUFF
Q1302 2SA1037K C-BUFF
Q1303 DTC144EK SW
Q1304 DTC124EK SW
IC1302 TBA9145/N2B CHROMA DECODER (PARENT)
IC1303 TDA4665T BASEBAND DELAY LINE (PARENT)
Q1305 2SA1037K Y-AMP
Q1319 2SC2412K Y-AMP
Q1306 2SC2412K DGP MIX
Q1307 2SC2412K DGP MIX
Q1308 2SC2412K SSCP-BUFF
Q1401 DTC114EK HSYNC INVERT
Q1402 2SC2412K SSCP SLICE
Q1403 2SC2412K R-Y BUFF
Q1404 2SC2412K B-Y BUFF
Q1405 2SA1037K Y-BUFF
Q1407 2SA1037K R-Y BUFF
Q1408 2SA1037K Y-BUFF
Q1409 2SA1037K B-Y BUFF
Q1410 2SC2412K FS-BUFF
Q1412 2SC2412K MUTE SW
Q1421 2SC2412K Y-BUFF
Q1424 2SC2412K F-HOOK UP
Q1425 2SC2412K Y-BUFF
IC1401 TBA8443B YUV-SWICH
Q1501 2SC2412K H0 INVERT
Q1502 2SC2412K H0-BUFF
Q1503 DTC144EK MUTE SW
Q1504 DTC114EK VP INVERT
Q1505 DTA114EK VP INVERT
Q1506 DTC114EK VP INVERT
Q1507 2SC2412K 50/60/NO SIG IDENT
IC1501 TDA2579B JUNGLE
Q1317 2SA1037K VIDEO BUFF
Q1323 DTC144K VSYNC INVERT
IC1305 AP664456 ON SCREEN DISPLAY (CHILD)
CN1301 40P WHT :BTOB
5V 12V GND SIG ON GND TRAP Y GND BAND C GND SCL GND SDA GND SSCP/50 VP/50 MUTE 50/60 MON Y SCK MON C STB MON V SI COMB Y GND COMB C GND V/50 GND U/50 GND Y/50 GND PIP RESET GND CHILD V

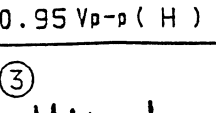
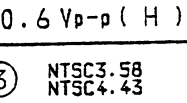
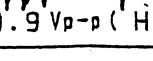
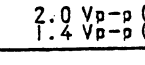
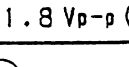
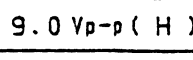
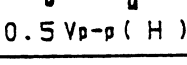
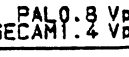
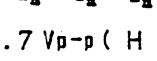
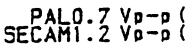
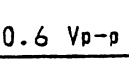
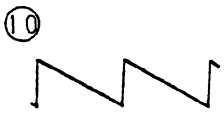
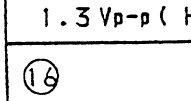
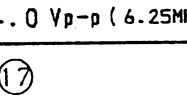
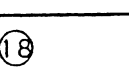
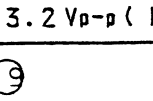
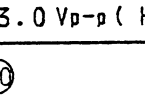
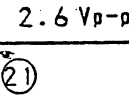
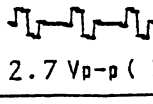
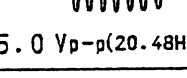
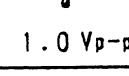
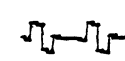
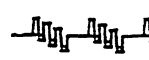

6
7
8
9
10
11
12
13
14
IC1401
TBA8443B
YUV-SWICH
Q1401
BTC114EK
HSYNC INVERT
FL1402
LPF
FL1403
FL1404
FL1405
FL1406
FL1407
Q1407
2SA1037K
R-Y BUFF
Q1408
2SA1037K
Y-BUFF
Q1409
2SA1037K
B-Y BUFF
Q1412
2SC2412K
MUTE SW
Q1410
2SC2412K
FS-BUFF
IC1404
SBA9188/3X
PIP PROCESSOR
IC1405
SBA9187/2X
A/B INTERFACE
FOR PIP
IC1408
NJM78M08FA
8V-REG
Q1413
BTC114EK
YSYNC INVERT
Q1414
2SC2412K
Y-BUFF
Q1415
2SA1037K
FEED BACK AMP
Q1416
2SC2412K
FEED BACK AMP
IC1406
TDA4665T
BASEBAND
DELAY LINE CHILD
D1401
MA3051L
5V LIMIT
Q1417
2SC2412K
R-Y BUFF
Q1422
2SA1037K
BGP-BUFF
Q1423
2SC2412K
SSCP SLICE
Q1418
2SC2412K
B-Y BUFF
IC1407
TDA9160A
CHROMA DECODER
/SYNC PROCESSOR
Q1411
BTC144K
HSYNC INVERT
Q1424
2SC2412K
F-HOOK UP
Q1425
2SC2412K
Y-BUFF
Q1403
2SC2412K
R-Y BUFF
Q1421
2SC2412K
Y-BUFF
D1402
DAP202K
PROTECT
Q1323
BTC144K
VSYNC INVERT
FL1301
EMI
Q1309
2SA1037K
2FSC INVERT
Q1310
2SA1037K
2FSC MIX
Q1311
2SA1037K
2FSC MIX
Q1325
2SA1037K SYNC-SEP
Q1318
2SC2412K
SYNC-BUFF
Q1324
2SC2412K
SYNC BUFF
D1307
MA110
IC1304
CXD2024Q
DIGITAL
COMB FILTER
IC1305
μPD6456
ON SCREEN
DISPLAY (CHILD)
D1309
MA110
OSD MIX
Q1317
2SA1037K
VIDEO BUFF
Q1316
2SA1037K
VIDEO-BUFF
Q1315
2SA1037K
Y-BUFF
Q1314
2SA1037K
Y-BUFF
FL1302
FL1303
FL1304
LPF
(SDA)
(SCL)
(12V)
(5V)
(8V)
5V
12V
8V
CN1301
40P
WHT
:DTOB-P
TRAP Y
GND
BAND C
GND
SCL
GND
SDA
GND
SSCP/50
VP/50
MUTE
50/60
MON Y
SCK
MON C
STB
MON V
SI
COMB Y
GND
COMB C
GND
V/50
GND
U/50
GND
Y/50
GND
PIP RESET
GND
CHILD V

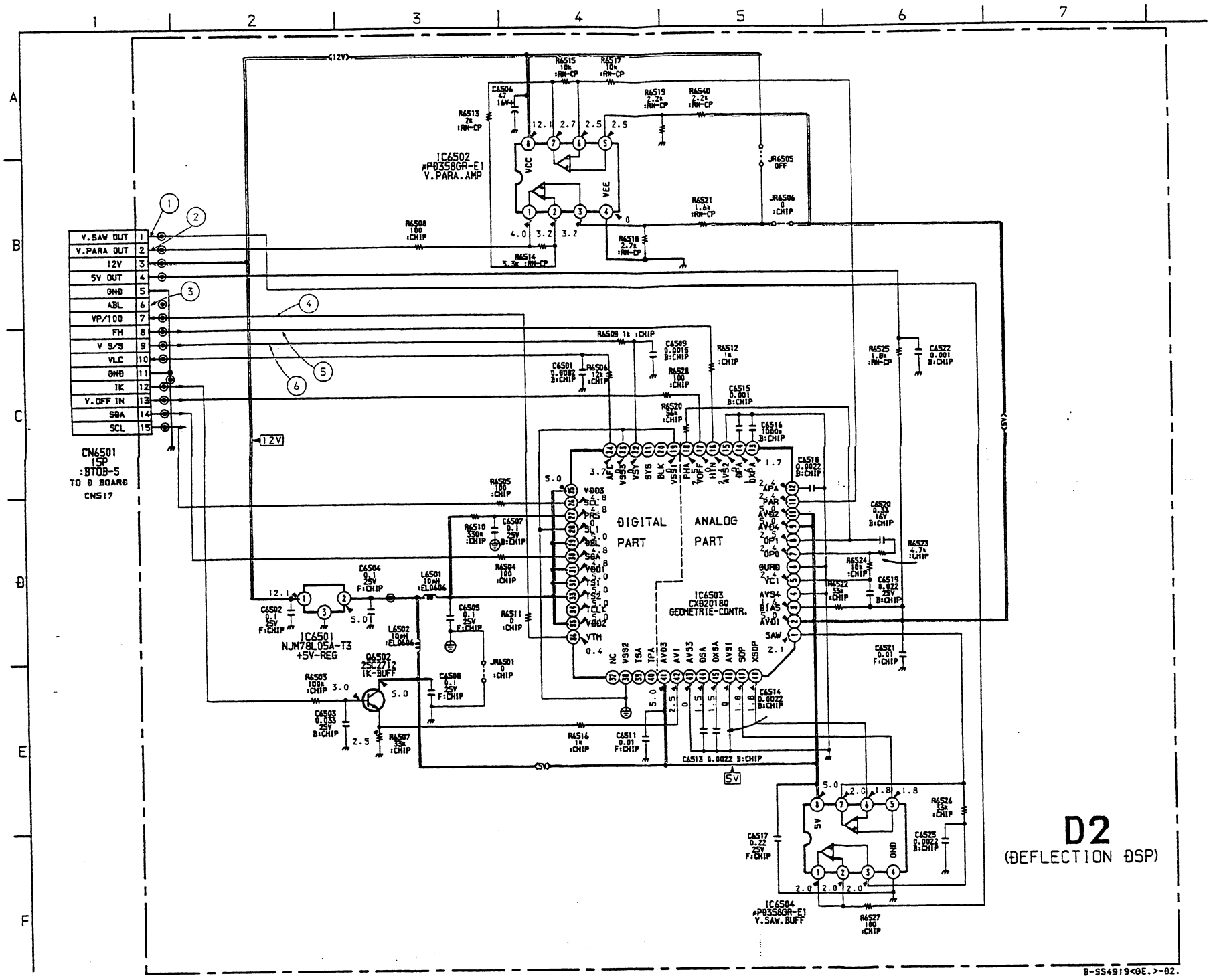

IC1401 TBA8443B YUV-SWICH
IC1404 SBA9188/3X PIP PROCESSOR
IC1405 SBA9187/2X A/B INTERFACE FOR PIP
IC1408 NJM78M08FA 8V-REG
IC1406 TBA4665T BASEBAND BELAY LINE CHILB
IC1407 TBA9160A CHROMA BECOBER /SYNC PROCESSOR
IC1304 CX820240 BIGITAL COMB FILTER
IC1305 μPD6456 ON SCREEN BISPLAY (CHILB)
Q1401 BTC114EK HSYNC INVERT
Q1403 2SC2412K R-Y BUFF
Q1404 2SC2412K B-Y BUFF
Q1405 2SA1037K Y-BUFF
Q1407 2SA1037K R-Y BUFF
Q1408 2SA1037K Y-BUFF
Q1409 2SA1037K B-Y BUFF
Q1410 2SC2412K FS-BUFF
Q1411 BTC144K HSYNC INVERT
Q1412 2SC2412K MUTE SW
Q1413 BTC114EK VSYNC INVERT
Q1414 2SC2412K Y-BUFF
Q1415 2SA1037K FEEB BACK AMP
Q1416 2SC2412K FEEB BACK AMP
Q1417 2SC2412K R-Y BUFF
Q1418 2SC2412K B-Y BUFF
Q1421 2SC2412K Y-BUFF
Q1422 2SA1037K BGP-BUFF
Q1423 2SC2412K SSCP SLICE
Q1424 2SC2412K F-HOOK UP
Q1425 2SC2412K Y-BUFF
D1401 MA3051L 5V LIMIT
D1402 BAP202K PROTECT
Q1309 2SA1037K 2FSC INVERT
Q1310 2SA1037K 2FSC MIX
Q1311 2SA1037K 2FSC MIX
Q1314 2SA1037K Y-BUFF
Q1315 2SA1037K Y-BUFF
Q1316 2SA1037K VIBEO-BUFF
Q1317 2SA1037K VIBEO BUFF
Q1318 2SC2412K SYNC-BUFF
Q1323 BTC144K VSYNC INVERT
Q1324 2SC2412K SYNC BUFF
Q1325 2SA1037K SYNC-SEP
D1307 MA110
D1309 MA110 OSB MIX
X1401 20.48MHz
FL1301 EMI
FL1302 LPF
FL1303 LPF
FL1402 LPF
FL1403 LPF
FL1404 LPF
FL1405 LPF
FL1406 LPF
FL1407 LPF
5V
8V
12V
(SBA)
(SCL)
CN1301 40P WHT :BTOB-P
GND
NO SIG
GND
TRAP Y
GNB
BANB C
GND
SCL
GND
SDA
GNB
SSCP/50
VP/50
MUTE
5040
MON Y
SCK
MON C
STB
MON V
SI
COMB Y
GND
COMB C
GND
V/50
GND
U/50
GND
Y/50
GNB
PIP RESET
GND
CHILB V



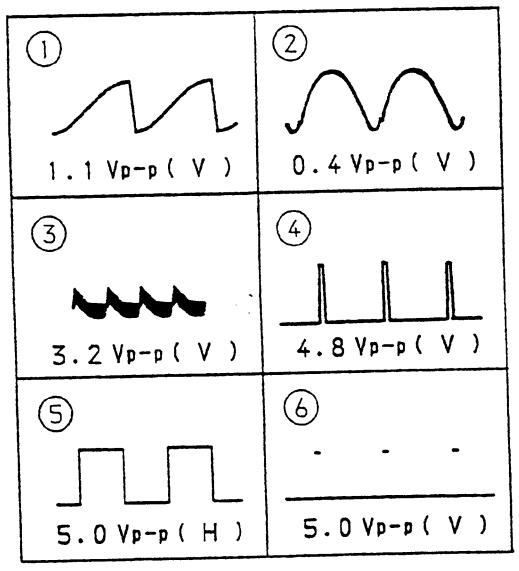
B-994919<GE.>-8..

• B BOARD WAVEFORMS

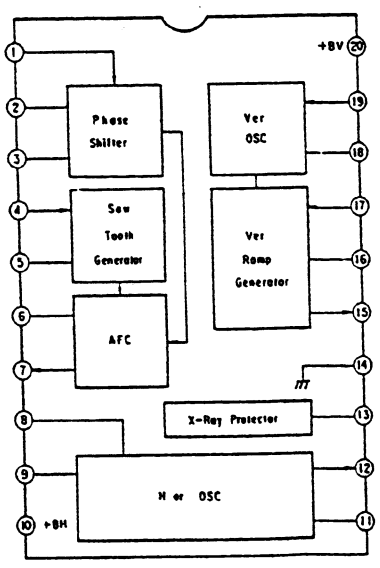
① 0.95 Vp-p (H)	② 0.6 Vp-p (H)	③ PAL1.4 Vp-
③  0.9 Vp-p (H)	③ NTSC3.58 NTSC4.43  2.0 Vp-p (H) 1.4 Vp-p (H)	④ 1.8 Vp-p (
⑤  9.0 Vp-p (H)	⑥  0.5 Vp-p (H)	⑦  PAL0.8 Vp SECAM1.4 Vp
⑦ NTSC3.58 NTSC4.43  0.7 Vp-p (H)	⑧  PAL0.7 Vp-p (H) SECAM1.2 Vp-p (H)	⑧ NTSC3.5 NTSC4.4  0.6 Vp-p
⑨  PAL0.9 Vp-p (H)	⑨  SECAM1.0Vp-p (H)	⑨ NTSC3.5 NTSC4.4  1.0 Vp-p 1.2 Vp-p
⑩  3.2 Vp-p (H)	⑪  6.0 Vp-p (H)	⑫  0.8 Vp-p
⑬ 1.3 Vp-p (H)	⑭  4.0 Vp-p (6.25MHz)	⑮  3.2 Vp-p
⑯  3.2 Vp-p (H)	⑰  3.0 Vp-p (H)	⑱  2.6 Vp-p
⑲  2.7 Vp-p (H)	⑳  5.0 Vp-p(20.48HMz)	㉑  1.0 Vp-p
㉒  0.9 Vp-p (H)	㉓  0.9 Vp-p (H)	㉔  2.3 Vp-p
㉕  1.4 Vp-p (H)	㉖  0.5 Vp-p (H)	㉗  0.7 Vp-
㉘  0.9 Vp-p (H)	㉙  3.2 Vp-p (H)	㉚  5.5 Vp-



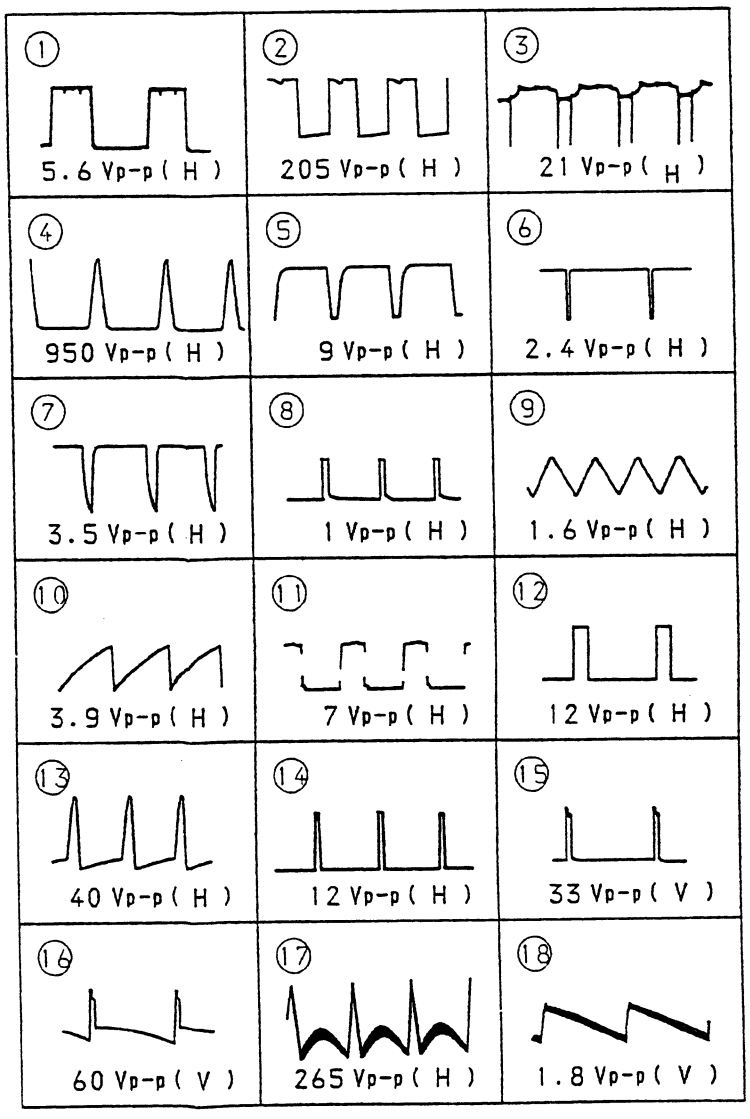
• D2 BOARD WAVEFORMS



D BOARD IC502 LA7856A



• D BOARD WAVEFORMS



D BOARD * MARK

Ref. No.	Location	28 INCH	32 INCH
C3553	H - 10	0.0027 630V	0.0033 630V
R503	F - 9	CONDCTOR	0
R504	F - 10	1M	470k
R538	F - 9	470k	330k
R2525	H - 1	CONDCTOR	0
T504	B - 10	PMT	-

○:TO BE MOUNT
-: NOT MOUNT

D2
(DEFLECTION DSP)

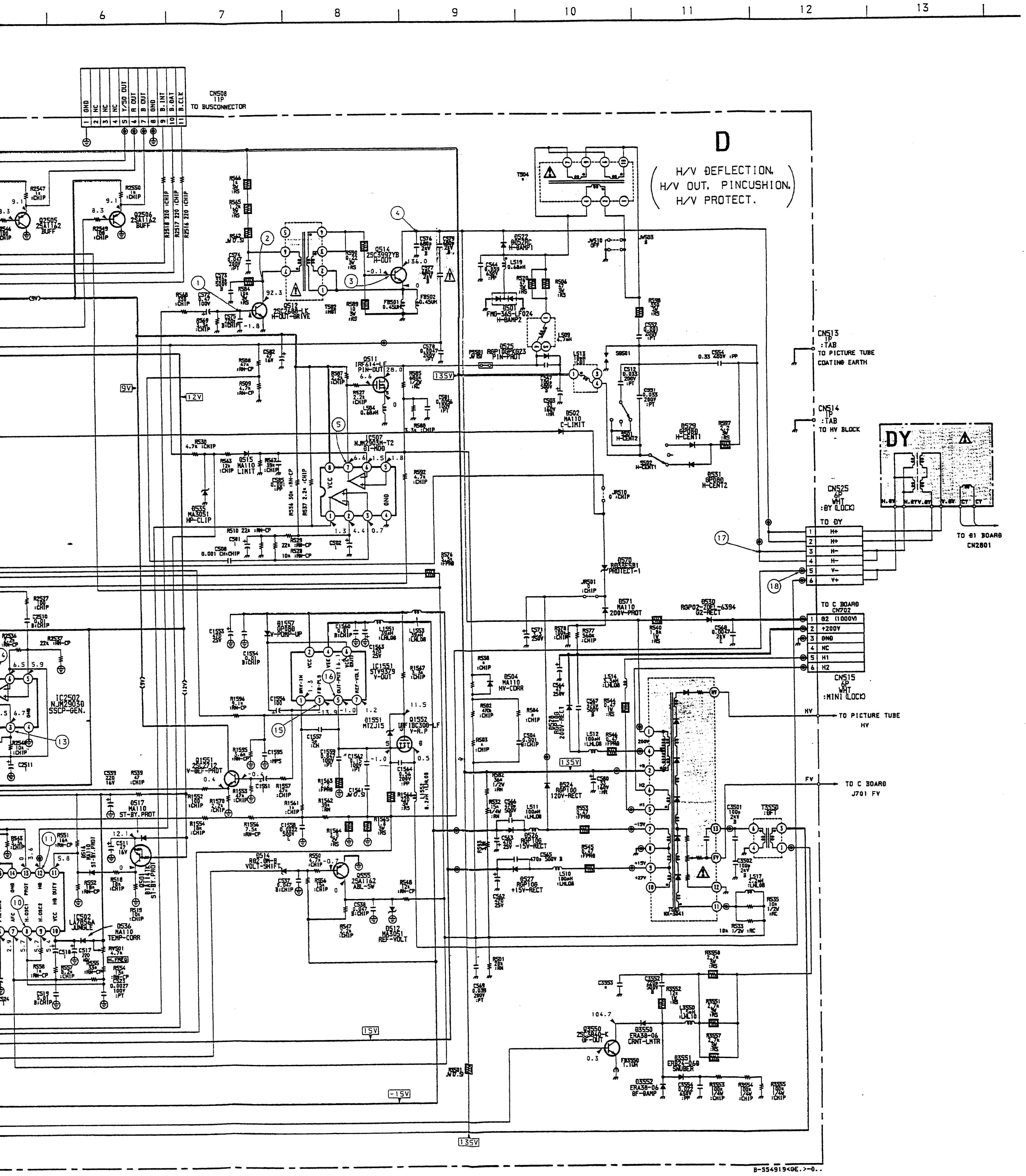
B-SS4919<DE.>-02.

③ 21 Vp-p (H)	⑥ 2.4 Vp-p (H)
⑨ 1.6 Vp-p (H)	⑫ 12 Vp-p (H)
⑮ 33 Vp-p (V)	⑱ 1.8 Vp-p (V)

D2
(DEFLECTION DSP)

B-5S4919<0E.>-02.

③	21 Vp-p (H)
⑥	2.4 Vp-p (H)
⑨	1.6 Vp-p (H)
⑫	12 Vp-p (H)
⑮	33 Vp-p (V)
⑱	1.8 Vp-p (V)

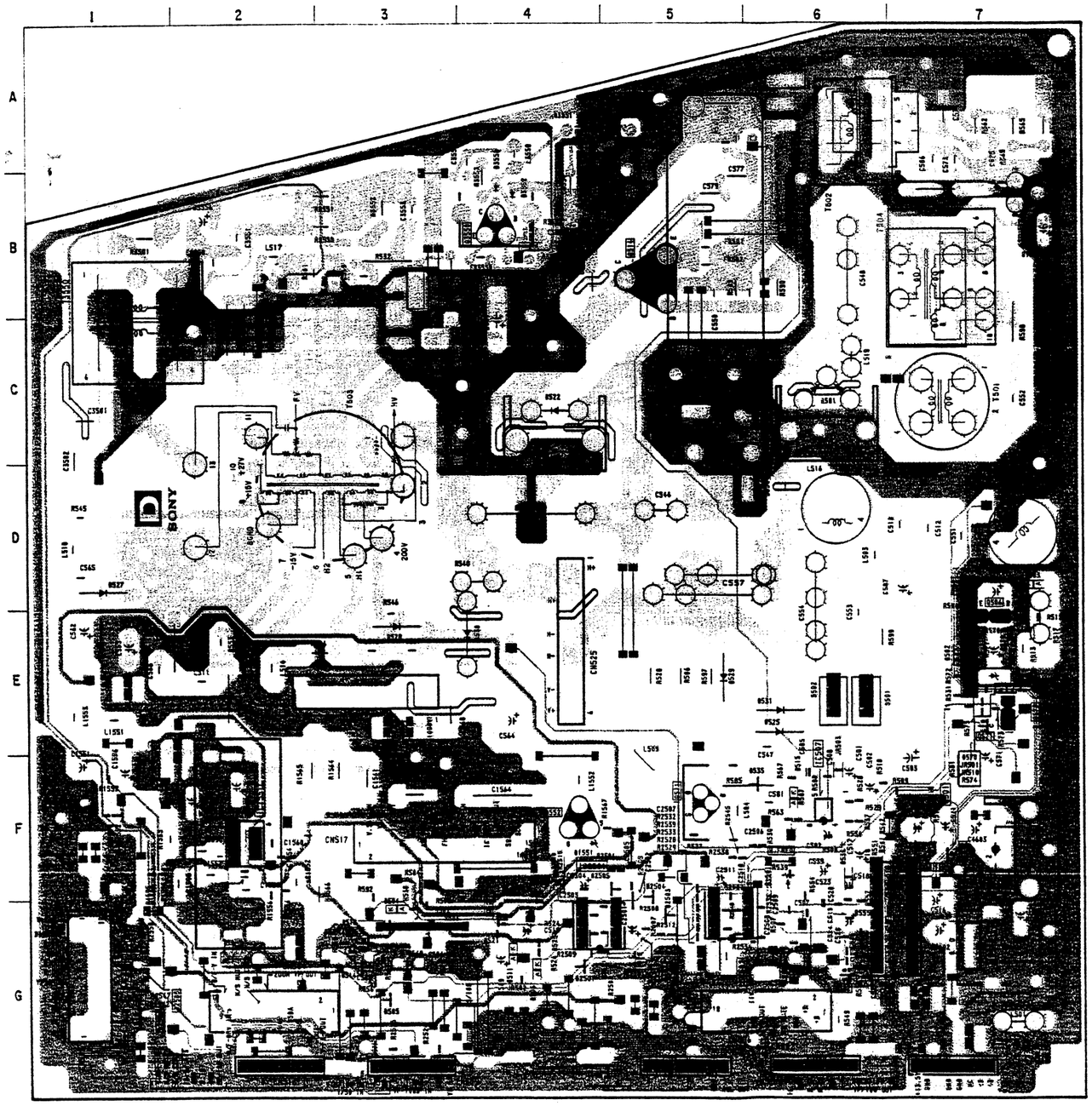

D
H/V DEFLECTION,
H/V OUT, PINCUSHION,
H/V PROTECT.
CN508 11P TO BUSCONNECTOR
GND NC NC NC Y/SO OUT R OUT B OUT GND B.INT B.DAT B.CLK
Q2505 2SA1162 BUFF
Q2506 2SA1162 BUFF
Q512 2SC2688-LK H-OUT-DRIVE
Q514 2SC3997YB H-OUT
Q511 IRF614-LF PIN-OUT
IC507 NJM2903M-T2 DI-MOD
D515 MA110 LIMIT
D535 MA3051 HP-CLIP
D522 BD52RC H-DAMP1
D501 FMG-36S-LF024 H-DAMP2
D525 RGP10GPK623 PIN-PROT
D502 MA110 C-LIMIT
D529 GP08D H-CENT1
D531 GP08D H-CENT2
S501 H-CENT2
S502 H-CENT1
CN513 1P :TAB TO PICTURE TUBE COATING EARTH
CN514 1P :TAB TO HV BLOCK
DY
CN525 6P WHT :DY LOCK
TO DY
H+ H+ H- H- V- V+
TO D1 BOARD CN2801
D570 RD33ESB1 PROTECT-1
D571 MA110 200V-PROT
D530 RGP02-20EL-6394 G2-RECT
TO C BOARD CN702
G2 (1000V) +200V GND NC H1 H2
CN515 6P WHT :MINI LOCK
HV TO PICTURE TUBE HV
FV TO C BOARD J701 FV
IC2502 NJM2903D SSCP-GEN.
D1557 GP08D V-PUMP-UP
IC1551 STV9379 V-OUT
Q1551 2SC2712 V-DEF-PROT
D1551 MTZJ15
Q1552 IRF1BC30G-LF V-R.P
D517 MA110 ST-BY.PROT
Q501 DTA114TK ST-BY.PROT
D516 MA110 ST-BY.PROT
IC502 LA7856A JUNGLE
D536 MA110 TEMP-CORR
RV501 4.7k H.FREQ
D514 RD2.0M-B VOLT-SHIFT
Q555 2SA1162 ABL-SW
D512 MA3051 REF-VOLT
D504 MA110 HV-CORR
D528 RGP10G 200V-RECT
D524 RGP10G 120V-RECT
D526 RGP10G -15V-RECT
D527 RGP10G +15V-RECT
T503 NX-3041
T3550 :DFT
Q3550 2SC3840-K DF-OUT
D3550 ERA38-06 CRNT-LMTR
D3551 ERB24-06B SNUBER
D3552 ERA38-06 DF-DAMP
9V 12V 135V 15V -15V
B-554919<GE.>-D..

D [H/V DEFLECTION, H/V OUT, PINCUSHION, H/V PROTECT] **D2** [DEFLECTION DSP]

Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

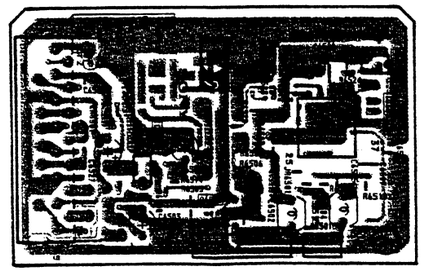
– D BOARD –

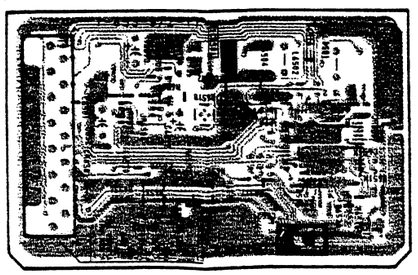


D BOARD

IC		Q2503	G – 5	D525	E – 5
IC502	G – 7	Q2504	G – 1	D526	E – 2
IC507	F – 6	Q2505	G – 1	D527	D – 1
IC1551	F – 2	Q2506	G – 1	D528	E – 3
IC2501	G – 4	Q3550	B – 4	D529	E – 5
IC2502	G – 5	**DIODE**		D530	E – 4
IC4601	G – 7	D501	C – 6	D531	E – 5
IC4602	F – 7	D502	E – 7	D535	F – 6
TRANSISTOR		D503	D – 7	D570	E – 7
Q501	F – 7	D504	G – 3	D571	E – 7
Q502	G – 6	D506	G – 4	D1551	F – 4
Q506	E – 7	D508	F – 7	D1557	F – 1
Q507	G – 4	D509	F – 7	Q2501	G – 4
Q508	F – 4	D511	G – 4	D2503	G – 5
Q511	F – 5	D512	G – 3	D2504	F – 5
Q512	B – 7	D514	G – 3	D2505	F – 5
Q514	B – 5	D515	F – 6	D3550	B – 4
Q555	G – 3	D516	F – 7	D3551	A – 4
Q1551	F – 1	D517	F – 7	D3552	B – 4
Q1552	F – 4	D522	C – 4		
Q2501	G – 5	D524	E – 2		

– D2 BOARD –





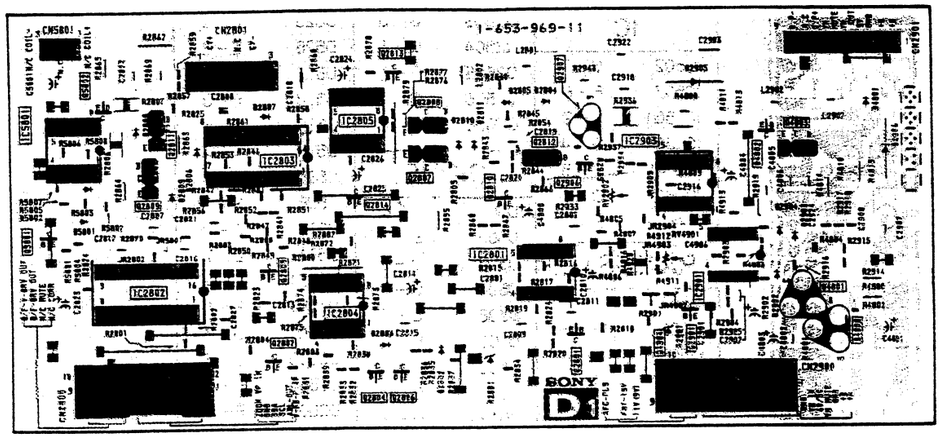
Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

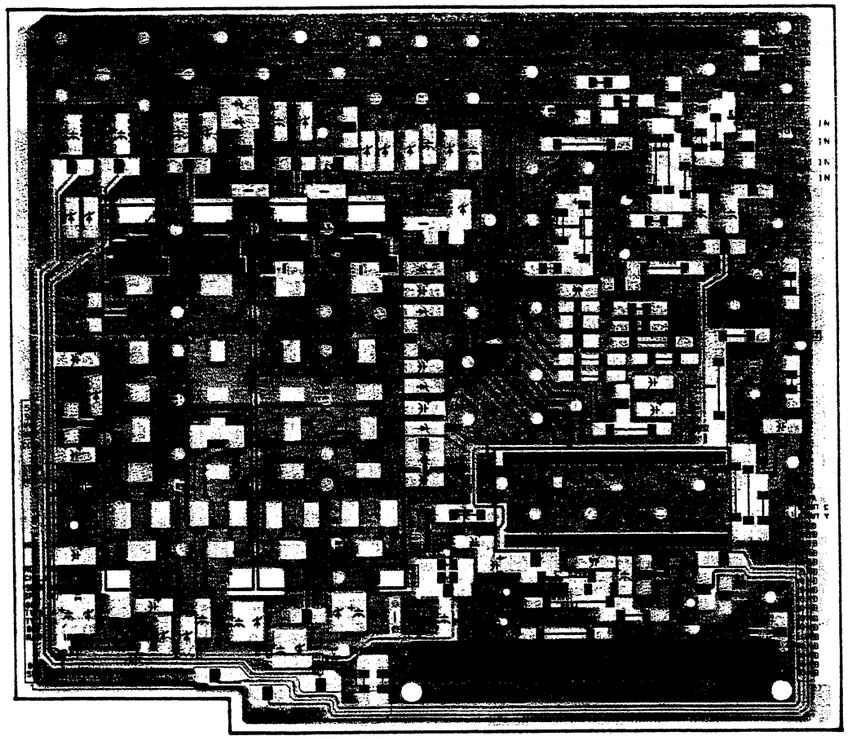
D1 [DYNAMIC CONVERGENCE, QUADRA POLE, DF DRIVE, PICTURE ROTATION]

J [AUDIO/VIDEO SW, AUDIO/VIDEO IN/OUT]

– D1 BOARD –



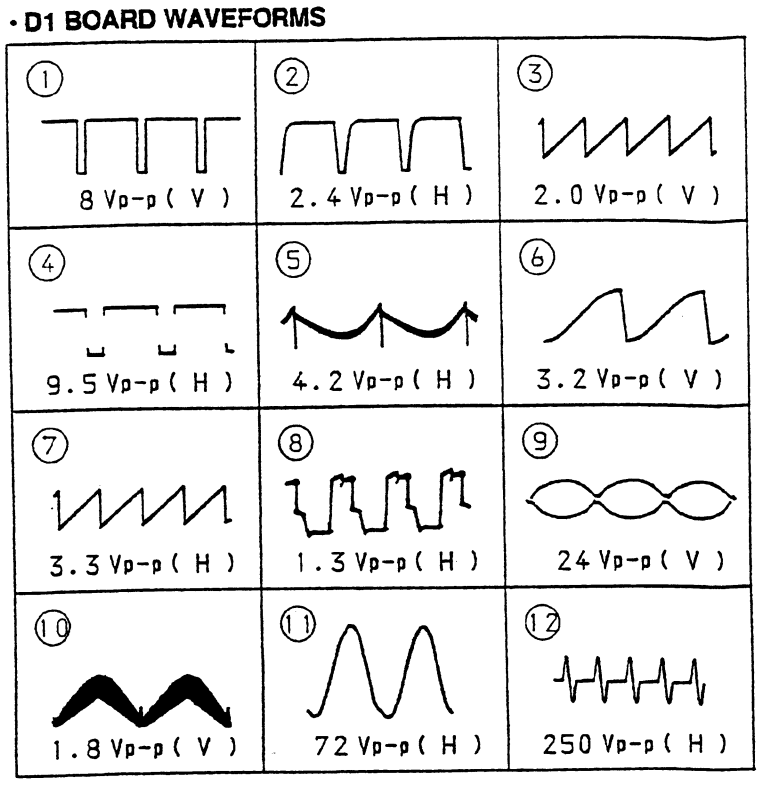
– J BOARD –



Note :

- ▒▒▒ : Pattern from the side which enables seeing.
- ■■■ : **Pattern of the rear side.**

• D1 BOARD WAVEFORMS

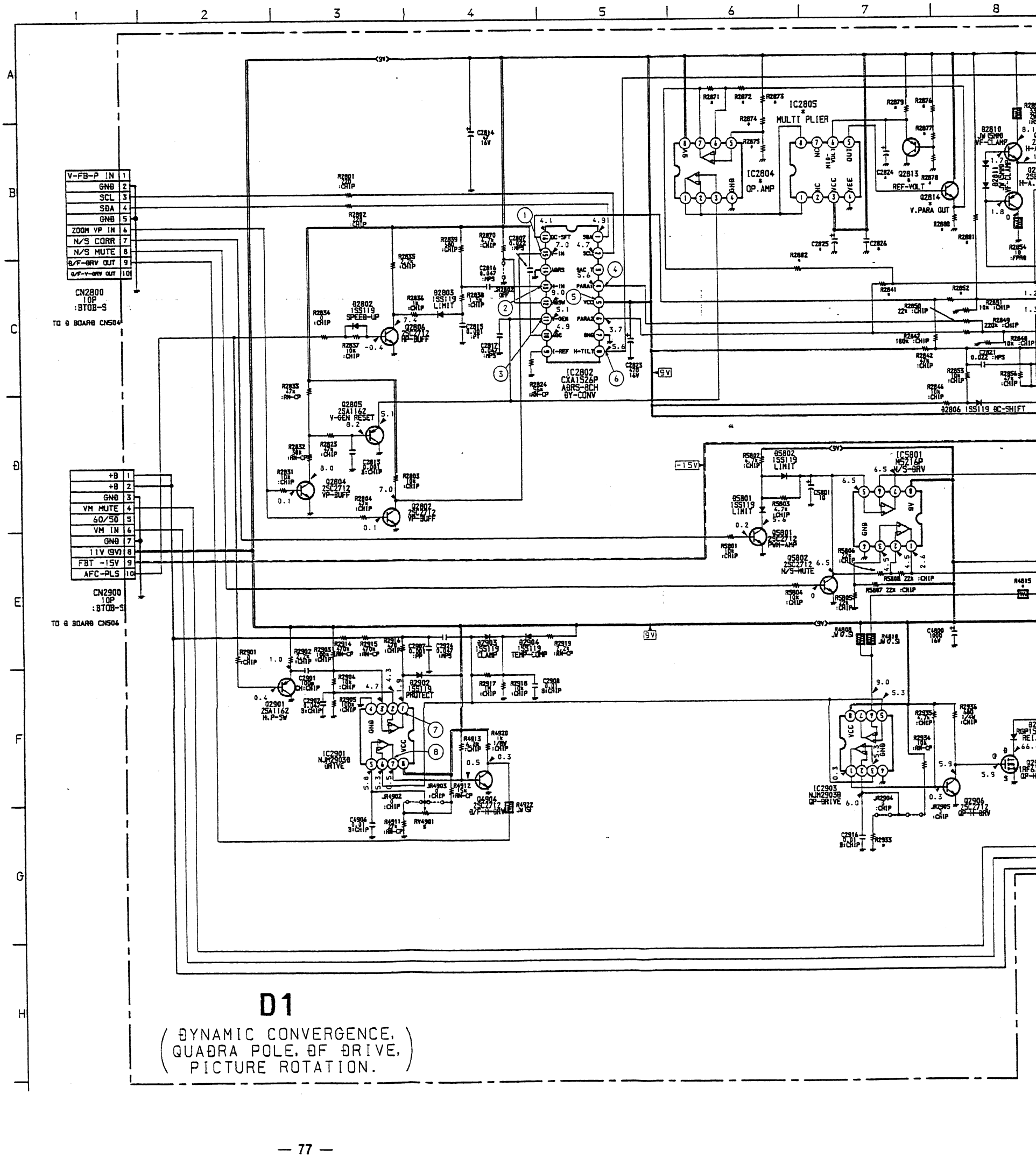


D1 BOARD * MARK

Ref. No.	Location	28 INCH	32 INCH
C2824	B-7	47 16V	-
C2825	B-7	47 16V	-
C2826	B-7	0.01	-
C2903	E-9	0.033 220V	0.022 200V
C2922	F-9	0.0015 630V	0.001 630V
IC2804	B-6	μPC358C	-
IC2805	B-7	CA0005AD	-
Q2813	B-7	2SA1162	-
Q2814	B-8	2SC2712	-
R2841	C-7	22k	47k
R2852	C-8	47k	10k

Ref. No.	Location	28 INCH	32 INCH
R2871	A-6	39k	-
R2872	A-6	10k	-
R2873	A-6	220	-
R2874	B-6	10k	-
R2875	B-6	10k	-
R2876	B-7	680	-
R2877	B-7	10k	-
R2878	B-7	10k	-
R2879	B-7	470 1/2W	-
R2880	B-8	470 1/2W	-
R2881	B-8	39k	-
R2882	C-7	22k	-
R2933	G-7	20k	22k
R4815	E-8	33 3W	39 3W

○:TO BE MOUNT
-:NOT MOUNT



D1

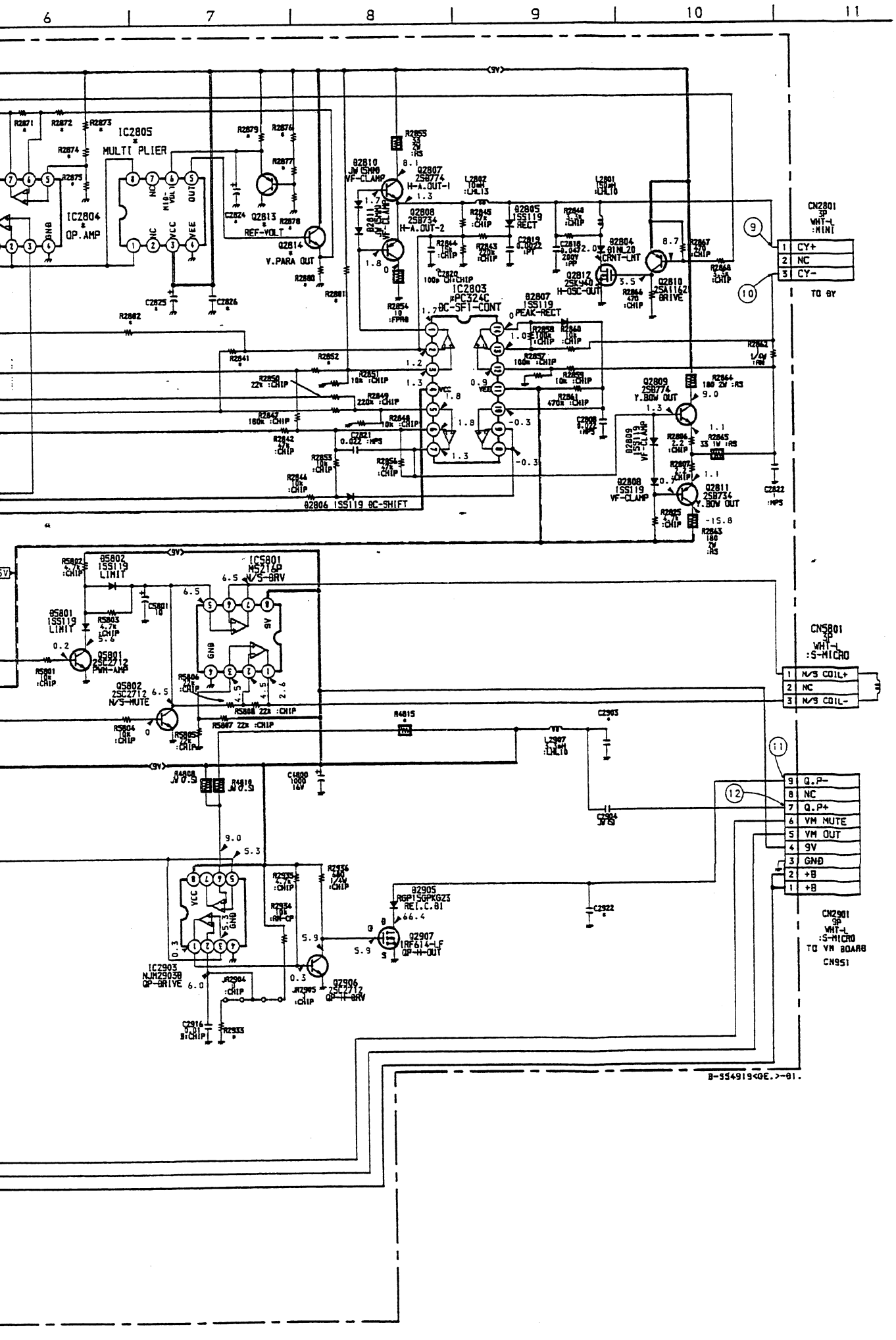
(ÐYNAMIC CONVERGENCE, QUAÐRA POLE, ÐF ÐRIVE, PICTURE ROTATION.)

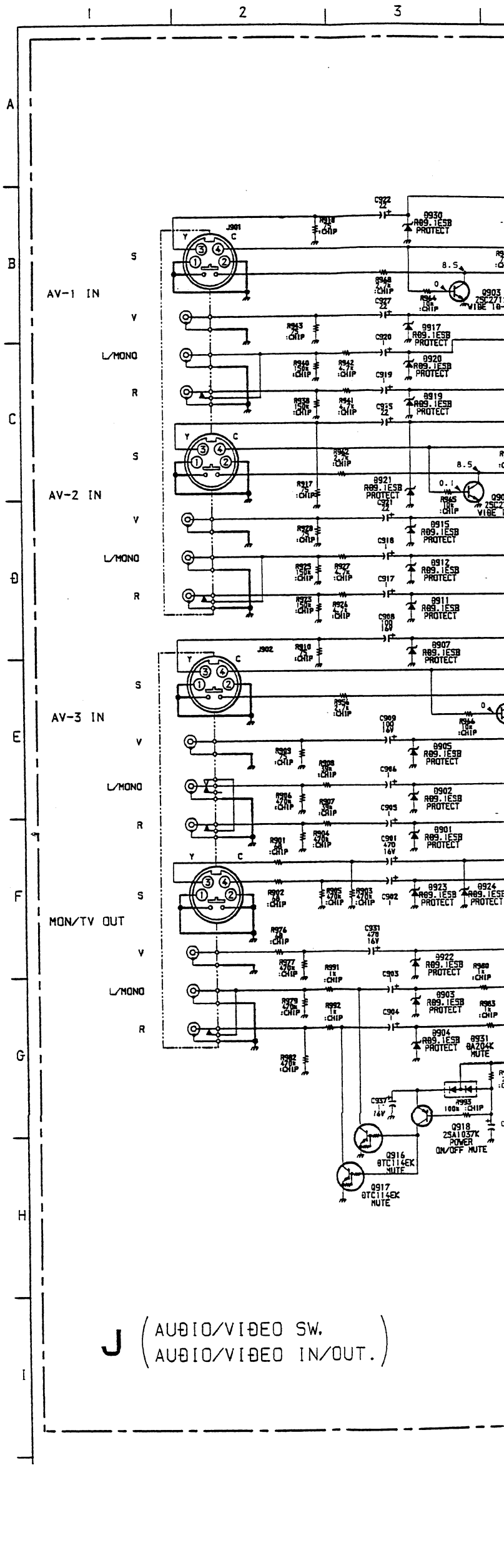
	Ref. No.	Location	28 INCH	32 INCH
	R2871	A – 6	39k	–
	R2872	A – 6	10k	–
	R2873	A – 6	220	–
	R2874	B – 6	10k	–
	R2875	B – 6	10k	–
	R2876	B – 7	680	–
	R2877	B – 7	10k	–
	R2878	B – 7	10k	–
	R2879	B – 7	470 1/2W	–
	R2880	B – 8	470 1/2W	–
	R2881	B – 8	39k	–
	R2882	C – 7	22k	–
	R2933	G – 7	20k	22k
	R4815	E – 8	33 3W	39 3W

○:TO BE MOUNT
–:NOT MOUNT

• J BOARD WAVEFORMS

① 0.8 Vp-p (H)	② 1.0 Vp-p (H)	③ 1.7 Vp-p (H)
④ 1.7 Vp-p (H)	⑤ 1.9 Vp-p (H)	⑥ 1.2 Vp-p (H)



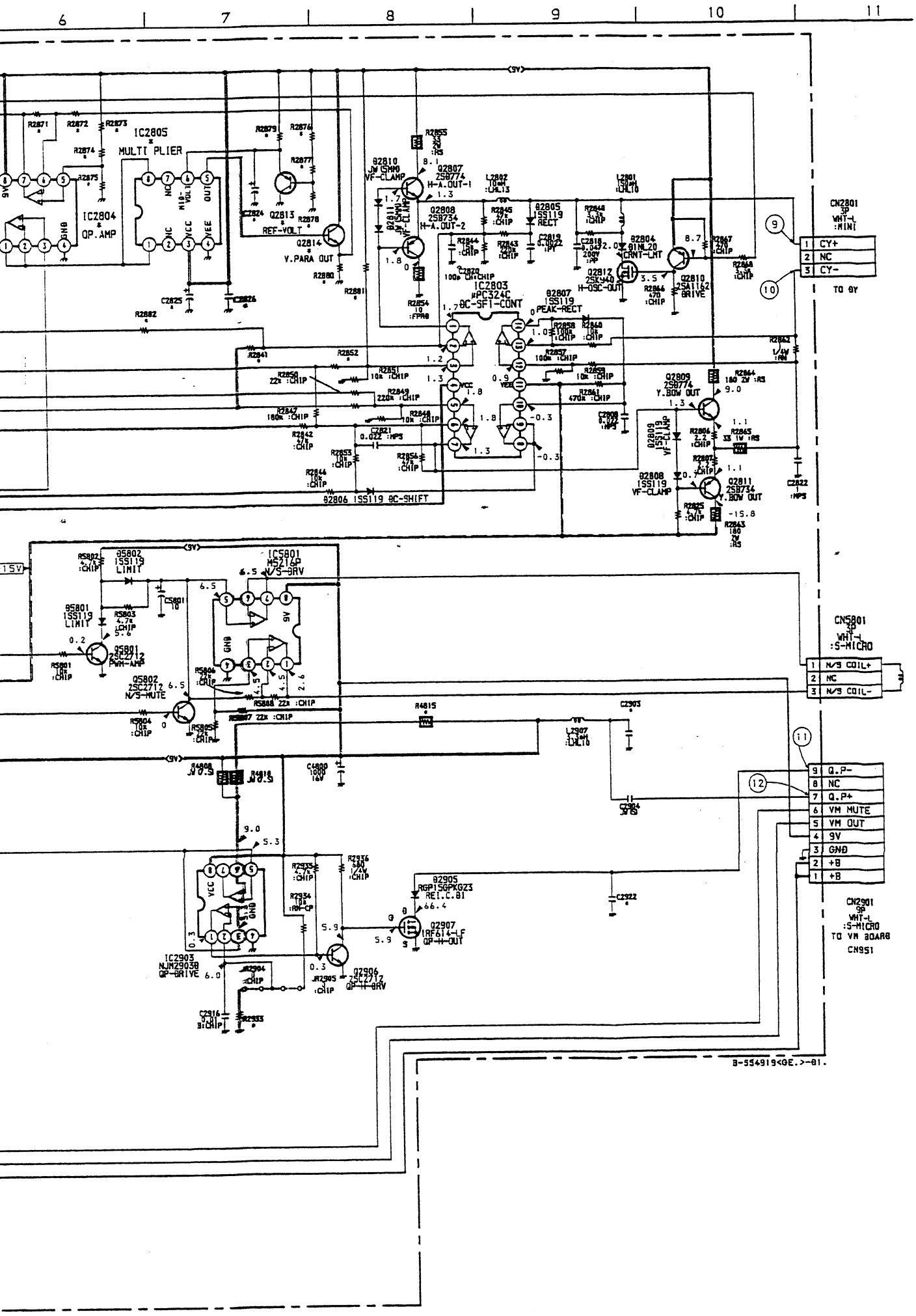


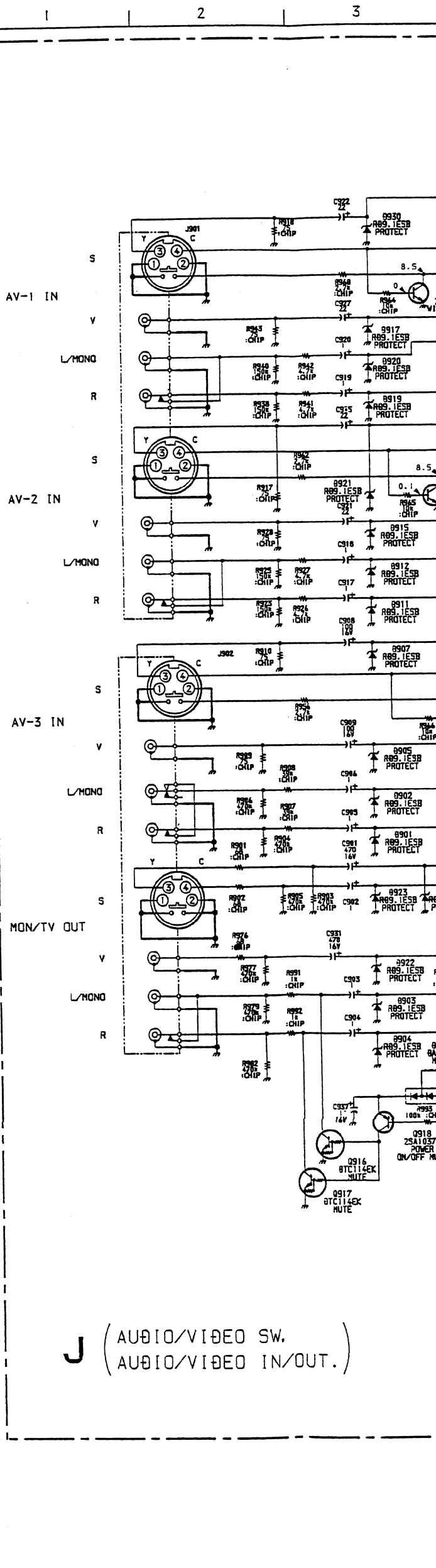
	Ref. No.	Location	28 INCH	32 INCH
	R2871	A-6	39k	-
	R2872	A-6	10k	-
	R2873	A-6	220	-
0V	R2874	B-6	10k	-
0V	R2875	B-6	10k	-
	R2876	B-7	680	-
	R2877	B-7	10k	-
	R2878	B-7	10k	-
	R2879	B-7	470 1/2W	-
	R2880	B-8	470 1/2W	-
	R2881	B-8	39k	-
	R2882	C-7	22k	-
	R2933	G-7	20k	22k
	R4815	E-8	33 3W	39 3W

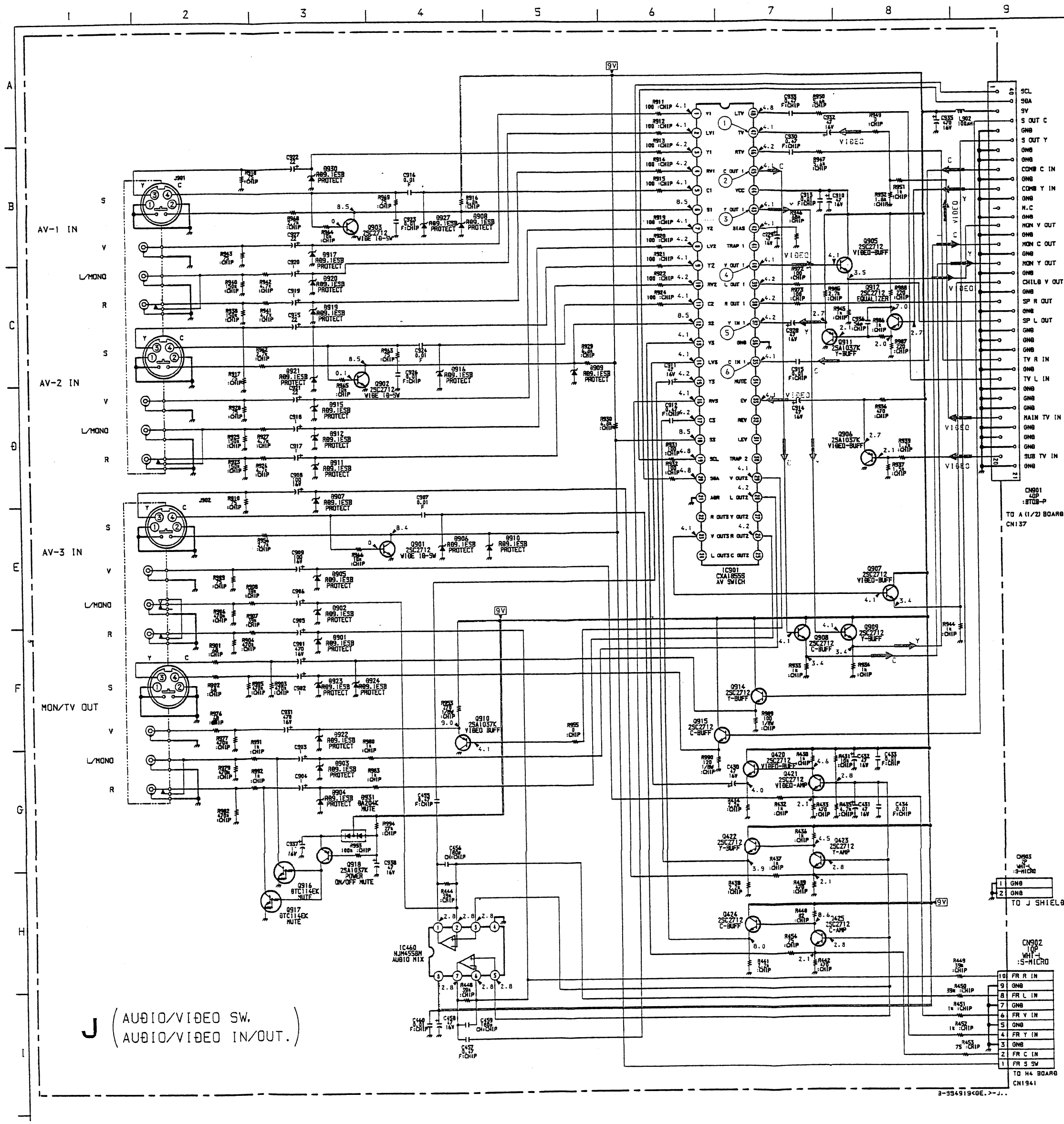
○:TO BE MOUNT
-:NOT MOUNT

• J BOARD WAVEFORMS

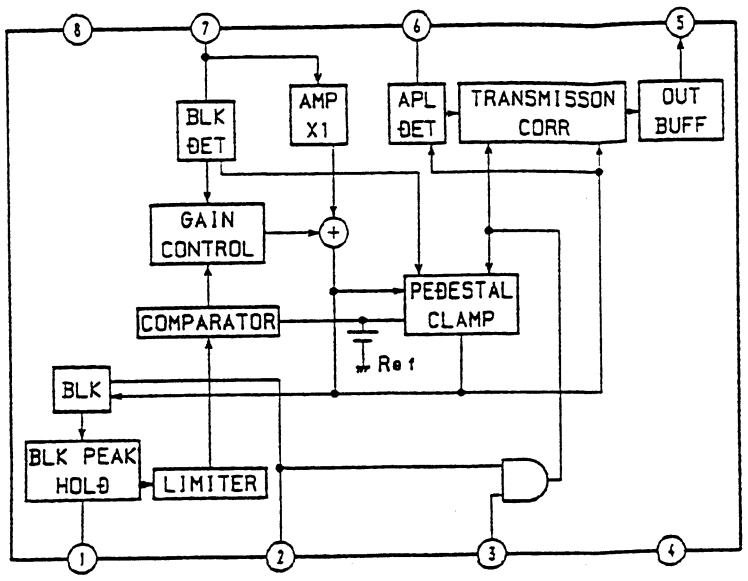
① 0.8 Vp-p (H)	② 1.0 Vp-p (H)	③ 1.7 Vp-p (H)
④ 1.7 Vp-p (H)	⑤ 1.9 Vp-p (H)	⑥ 1.2 Vp-p (H)





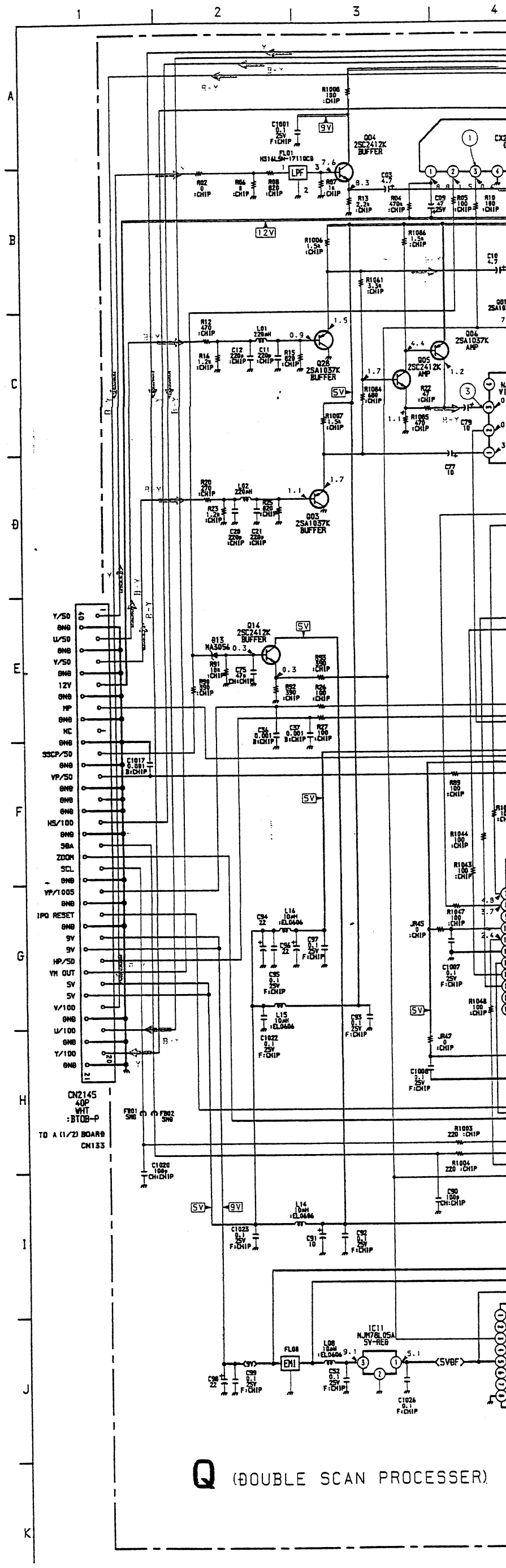

AV-1 IN
AV-2 IN
AV-3 IN
MON/TV OUT
J (AUDIO/VIDEO SW. AUDIO/VIDEO IN/OUT.)
IC901 CXA1855S AV SWITCH
IC460 NJM4558M AUDIO MIX
Q901 2SC2712 WIDE 10-5W
Q902 2SC2712 WIDE 10-5W
Q903 2SC2712 WIDE 10-5W
Q905 2SC2712 VIDEO-BUFF
Q906 2SA1037K VIDEO-BUFF
Q907 2SC2712 VIDEO-BUFF
Q908 2SC2712 C-BUFF
Q909 2SC2712 Y-BUFF
Q910 2SA1037K VIDEO BUFF
Q911 2SA1037K Y-BUFF
Q912 2SC2712 EQUALIZER
Q914 2SC2712 Y-BUFF
Q915 2SC2712 C-BUFF
Q916 DTC114EK MUTE
Q917 DTC114EK MUTE
Q918 2SA1037K POWER ON/OFF MUTE
Q420 2SC2712 VIDEO-BUFF
Q421 2SC2712 VIDEO-AMP
Q422 2SC2712 Y-BUFF
Q423 2SC2712 Y-AMP
Q424 2SC2712 C-BUFF
Q425 2SC2712 C-AMP
Q931 DA204K MUTE
CN901 40P :8TOB-P
TO A (1/2) BOARD CN137
CN903 2P WHT-L :S-MICRO
TO J SHIELD
CN902 10P WHT-L :S-MICRO
TO H4 BOARD CN1941
SCL
SDA
9V
S OUT C
S OUT Y
COMB C IN
COMB Y IN
N.C
MON V OUT
MON C OUT
MON Y OUT
CHILD V OUT
SP R OUT
SP L OUT
TV R IN
TV L IN
MAIN TV IN
SUB TV IN
FR R IN
FR L IN
FR V IN
FR Y IN
FR C IN
FR S SW

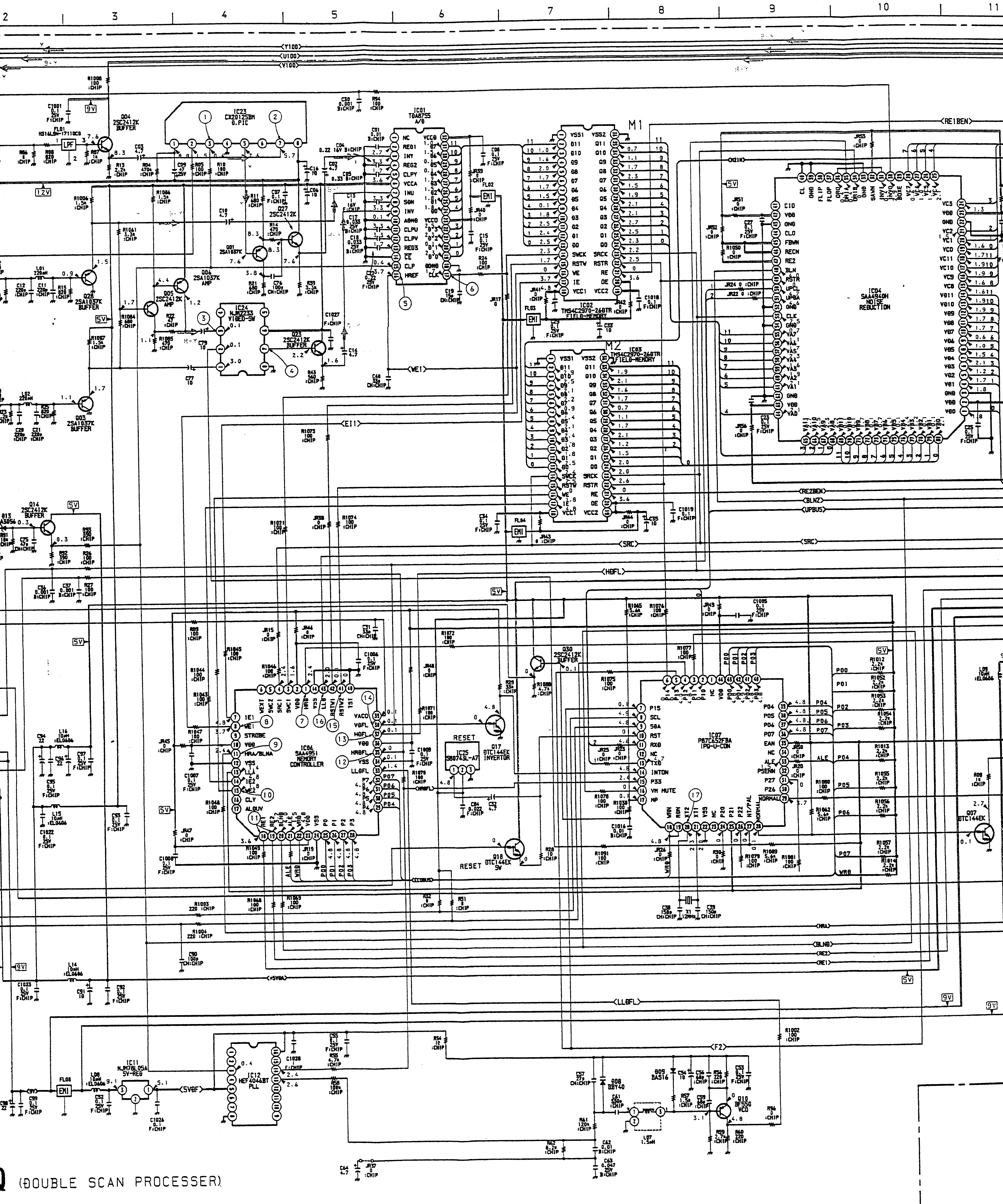
Q BOARD IC23 CX20125BM



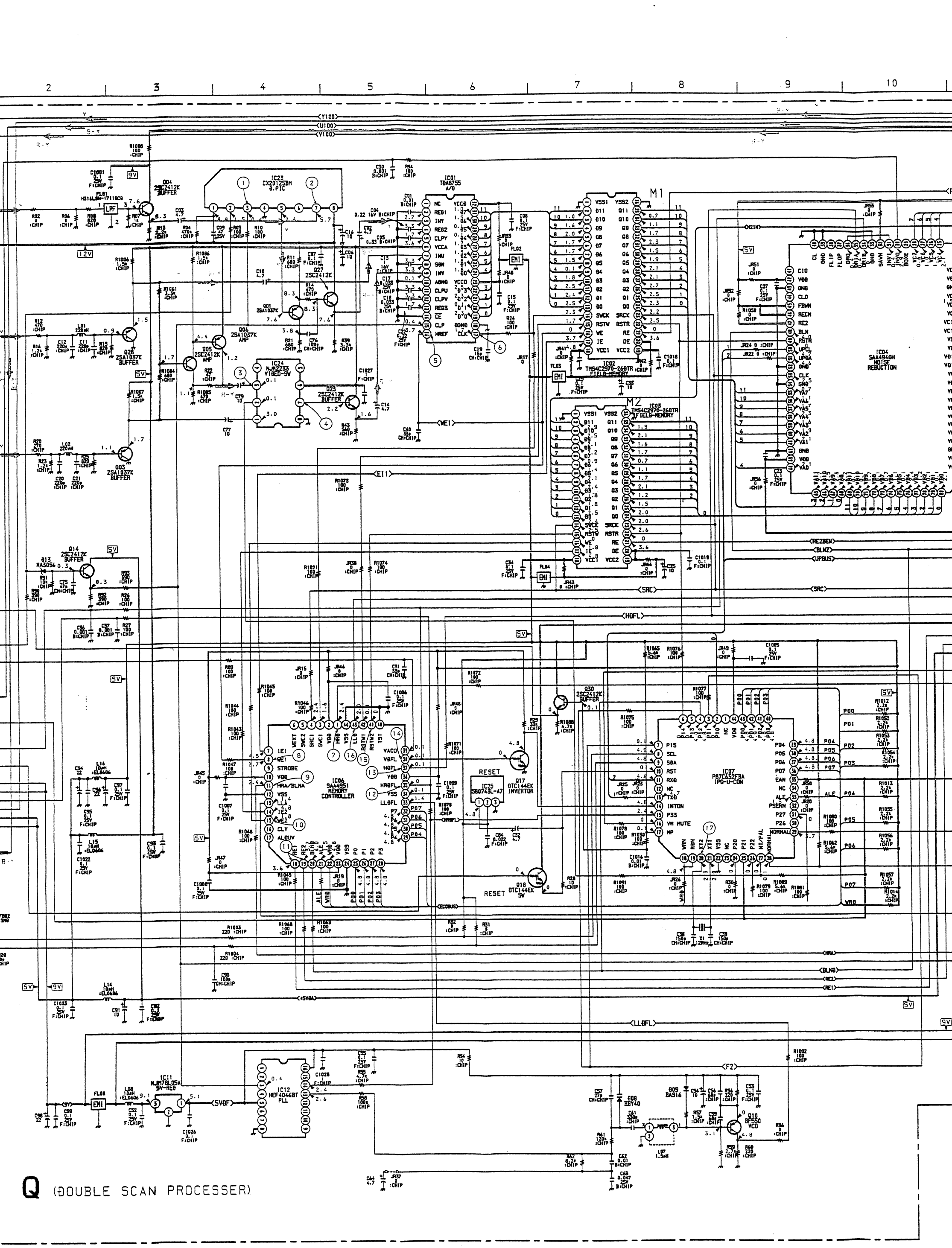
• Q BOARD WAVEFORMS

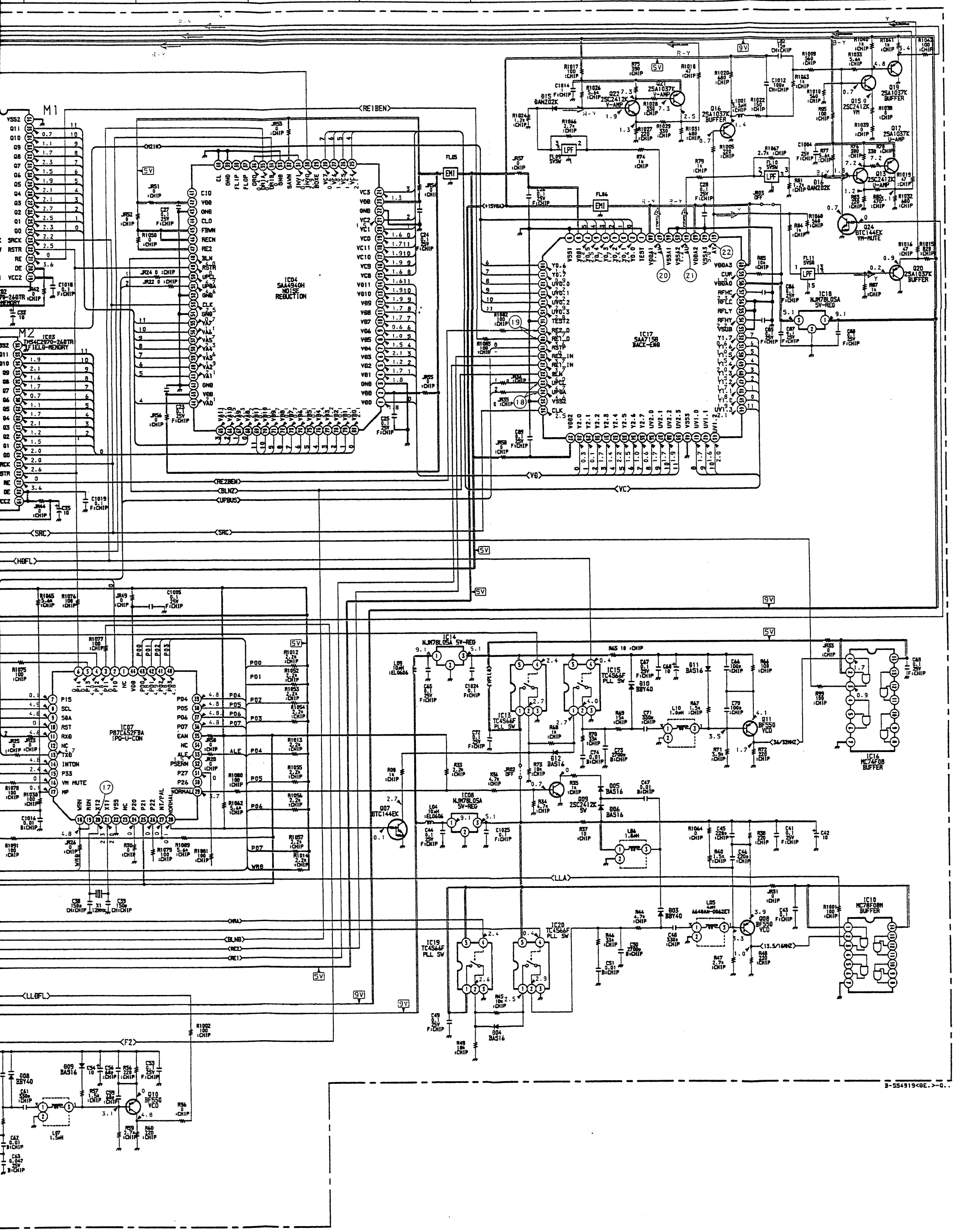
① 3.2 Vp-p (H)	② 1.0 Vp-p (H)	③ '0.7 Vp-p (H)
④ 0.8 Vp-p (H)	⑤ 3.2 Vp-p (H)	⑥ 4.2 Vp-p (16MHz)
⑦ 5.0 Vp-p (H)	⑧ 4.8 Vp-p (H)	⑨ 4.8 Vp-p (H)
⑩ 4.6 Vp-p (H)	⑪ 4.6 Vp-p (H)	⑫ 4.8 Vp-p (H)
⑬ 4.8 Vp-p (H)	⑭ 4.8 Vp-p (V)	⑮ 4.8 Vp-p (V)
⑯ 3.3 Vp-p (25MHz)	⑰ 4.5 Vp-p (12.5MHz)	⑱ 4.8 Vp-p (V)
⑲ 3.2 Vp-p (H)	⑳ 1.3 Vp-p (H)	㉑ 1.2 Vp-p (H)
㉒ 1.2 Vp-p (H)		



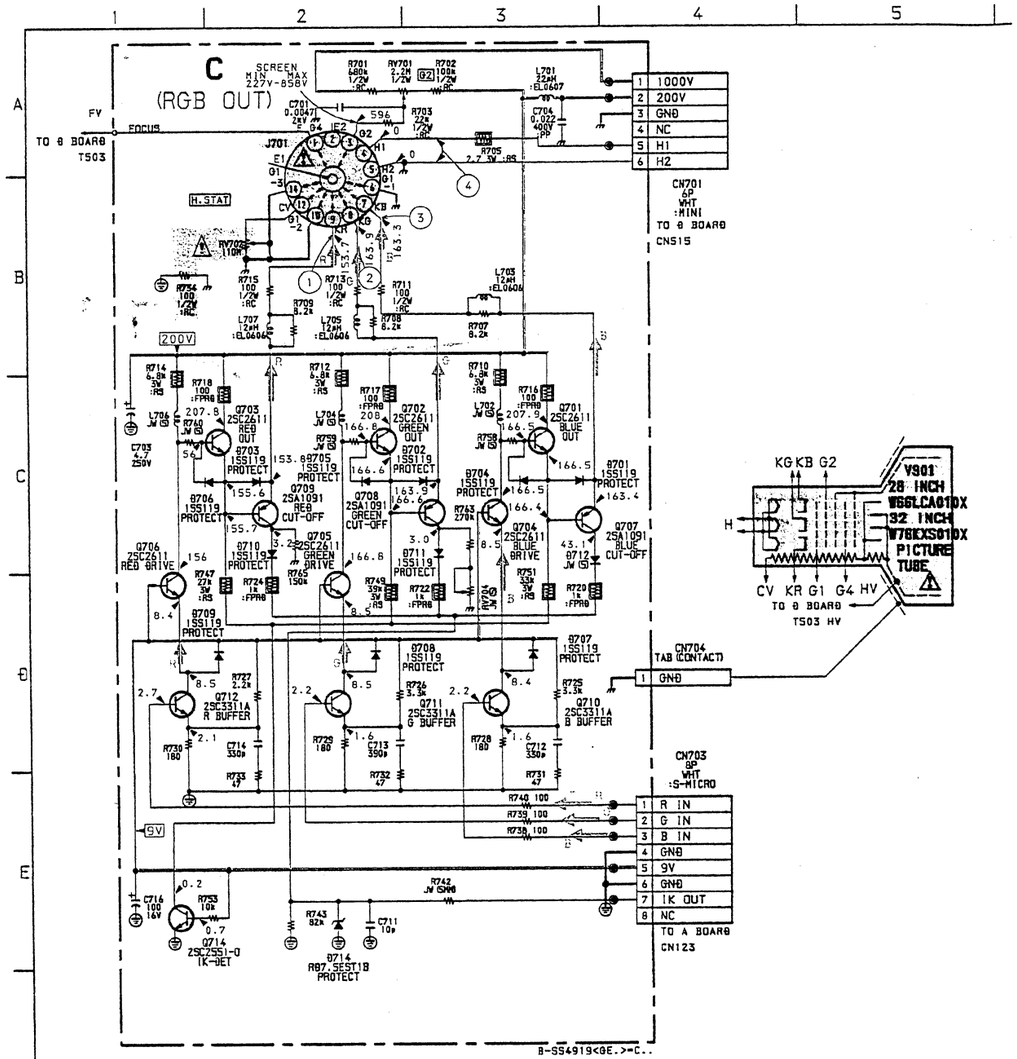


Q (DOUBLE SCAN PROCESSER)


IC23 CX20125BM 0.PIC
IC01 TDA8755 A/D
IC02 TMS4C2970-26DTR FIELD-MEMORY
IC03 TMS4C2970-26DTR FIELD-MEMORY
IC04 SAA4940H NOISE REDUCTION
IC06 SAA4951 MEMORY CONTROLLER
IC07 P87C452FBA IPQ-U-CON
IC24 NJM2233 V16ED-SW
IC25 S80743L-A7
IC11 NJM78L05A 5V-REG
IC12 HEF4046BT PLL
M1
M2
LPF
RESET
Q (DOUBLE SCAN PROCESSER)


M1
M2
IC03 THS4C2970-26BTR FIELD-MEMORY
IC04 SAA4940H NOISE REDUCTION
IC07 P87C652FBA IPQ-U-CON
IC08 NJM78L05A 5V-REG
IC10 MC78F08M BUFFER
IC13 TC4S66F PLL SW
IC14 NJM78L05A 5V-REG
IC15 TC4S66F PLL SW
IC16 MC74F08 BUFFER
IC17 SAA7158 BACK-END
IC18 NJM78L05A 5V-REG
IC19 TC4S66F PLL SW
IC20 TC4S66F PLL SW
Q15 2SC2412K VM
Q16 2SA1037K BUFFER
Q17 2SA1037K V-AMP
Q18 2SC2412K V-AMP
Q19 2SA1037K BUFFER
Q20 2SA1037K BUFFER
Q21 2SA1037K V-AMP
Q22 2SC2412K V-AMP
Q23 DAN202K
Q24 DTC144EK VM-MUTE
Q07 DTC144EK
Q08 BF550 VCO
Q09 2SC2412K 5V
Q10 BF550 VCO
Q11 BF550 VCO
Q12 2SA1037K U-AMP
Q13 2SC2412K U-AMP
Q14 DAN202K
D03 BBY40
D04 BAS16
D05 BAS16
D06 BAS16
D08 BBY40
D09 BAS16
D10 BBY40
D11 BAS16
D12 BAS16
L04 10uH
L05 4.4uH
L06 1.8uH
L07 1.5uH
L08 10uH
L09 10uH
L10 1.0uH
X1 12MHz
FL05 EMI
FL06 EMI
FL09 SVSW
FL10 SVSW
FL11 SVSW
LPF
5V
9V
RE1BEN
H21K
RE2BEN
BLNZ
UPBUS
SRC
HBFL
LLA
LL-BFL
F2
VB
VC
34/32MHZ
13.5/16MHZ

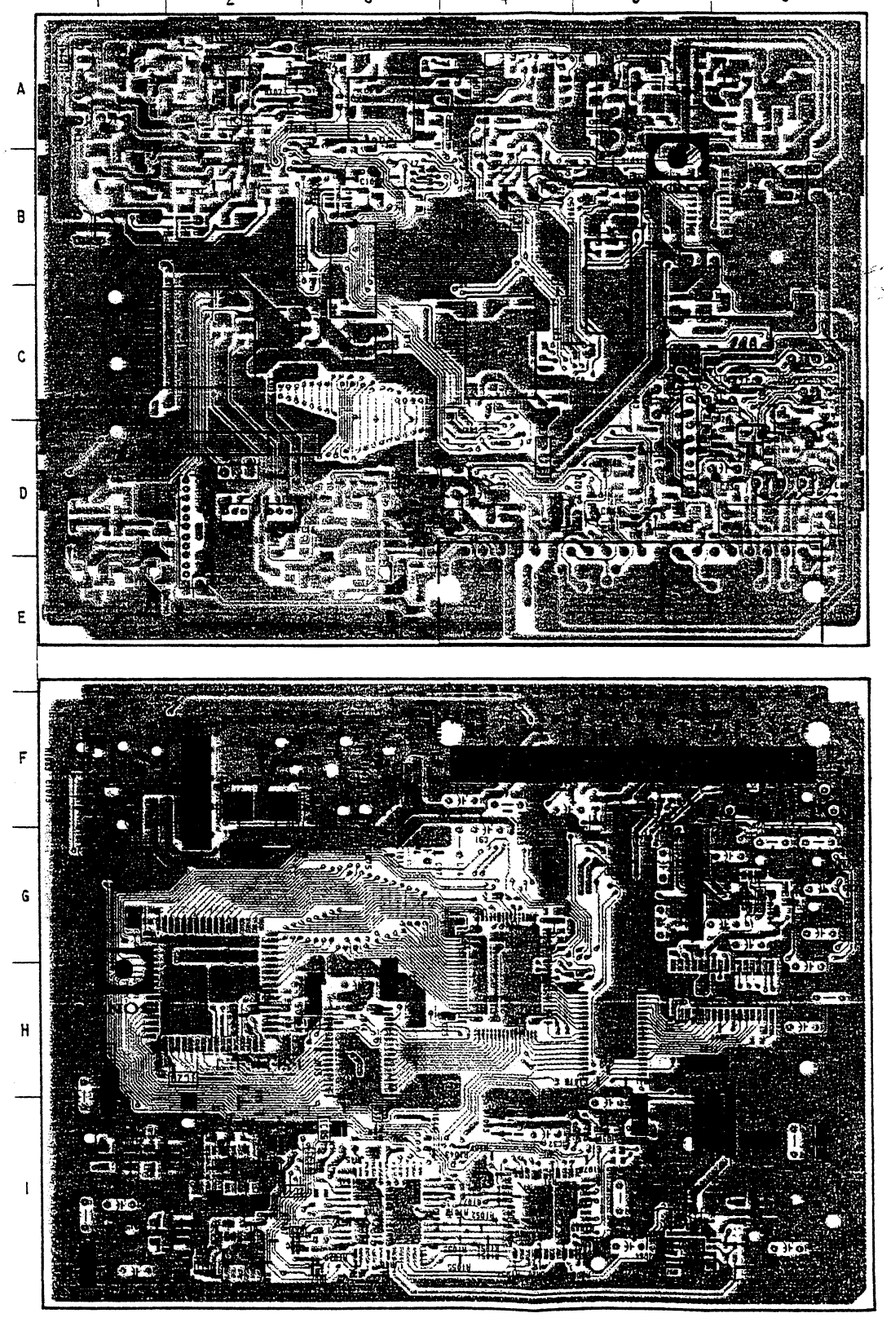
Q [DOUBLE SCAN PROCESSER] C [R. G. B OUT]



• C BOARD WAVEFORMS

① 132 Vp-p (H)	② 117 Vp-p (H)	③ 110 Vp-p (H)
④ 27 Vp-p (H)		

– Q BOARD –



Q BOARD

IC	
IC01	C – 5
IC02	C – 5
IC03	B – 3
IC04	C – 4
IC06	A – 3
IC07	A – 4
IC08	B – 1, H – 1
IC11	B – 6, I – 6
IC12	I – 5
IC13	I – 2
IC14	A – 1, I – 1
IC15	I – 2
IC16	A – 2
IC17	C – 2
IC18	C – 3, H – 3
IC19	I – 2
IC20	I – 2
IC23	D – 5, G – 5
IC24	D – 6
IC25	B – 4

TRANSISTOR	
Q01	G – 5
Q03	G – 6
Q04	F – 6
Q05	G – 6
Q06	G – 6
Q07	I – 3
Q08	I – 2
Q09	I – 2

Note :

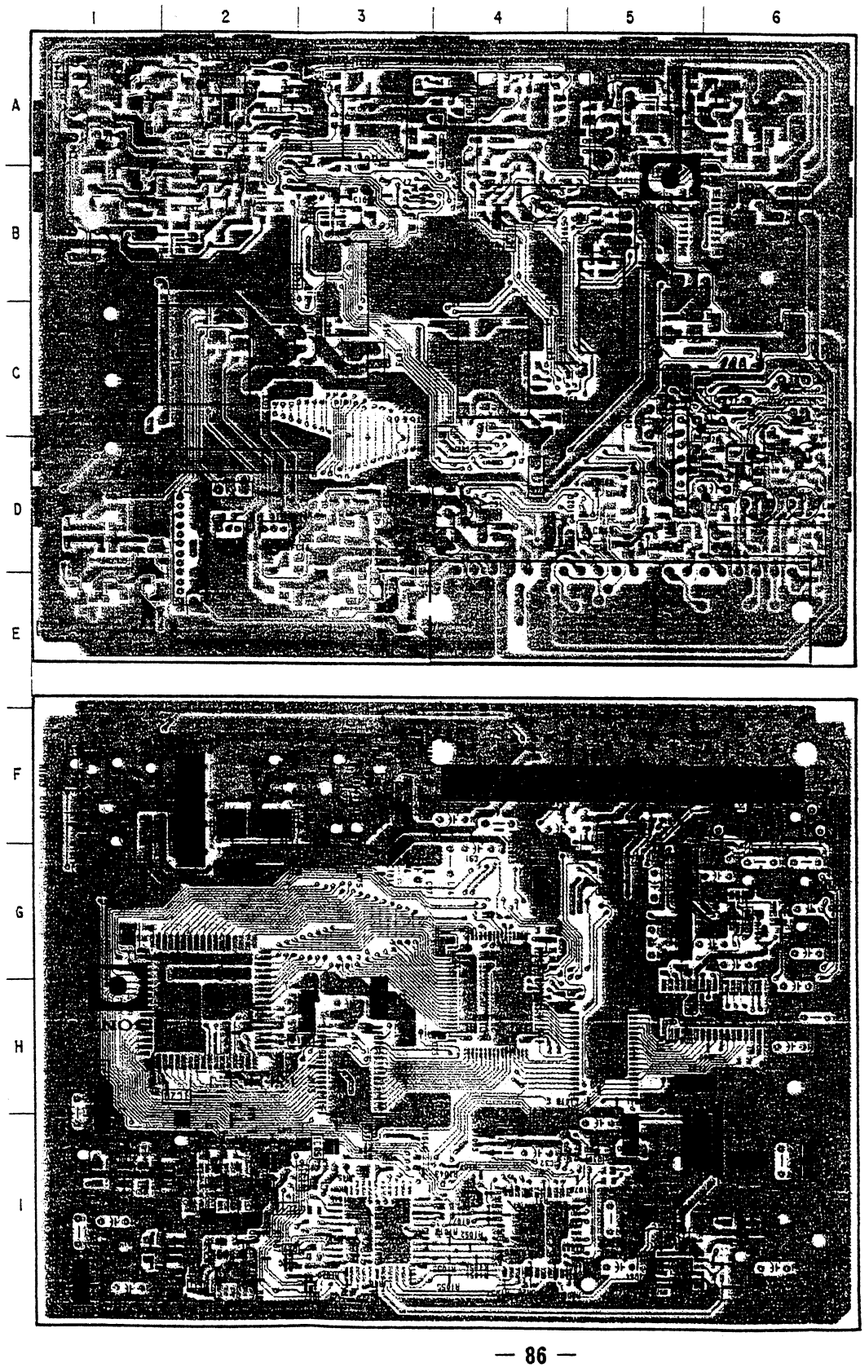
• Pattern from the

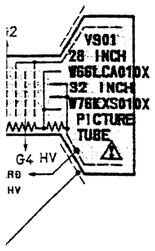
• :Pattern of the re

5

Q [DOUBLE SCAN PROCESSER] **C** [R. G. B OUT]

– Q BOARD –





Q BOARD

IC			
IC01	C-5	Q10	I-6
IC02	C-5	Q11	I-2
IC03	B-3	Q12	F-3
IC04	C-4	Q13	F-3
IC06	A-3	Q14	F-5
IC07	A-4	Q15	F-1
IC08	B-1, H-1	Q16	G-1
IC11	B-6, I-6	Q17	I-3
IC12	I-5	Q18	G-5
IC13	I-2	Q19	F-1
IC14	A-1, I-1	Q20	F-3
IC15	I-2	Q21	F-3
IC16	A-2	Q22	F-3
IC17	C-2	Q23	D-6
IC18	C-3, H-3	Q24	F-1
IC19	I-2	Q27	G-6
IC20	I-2	Q28	G-6
IC23	D-5, G-5	Q30	I-5
IC24	D-6	**DIODE**	
IC25	B-4	D03	I-1
TRANSISTOR		D04	I-2
Q01	G-5	D05	I-2
Q03	G-6	D06	I-1
Q04	F-6	D08	I-6
Q05	G-6	D09	I-5
Q06	G-6	D10	I-2
Q07	I-3	D11	I-1
Q08	I-2	D12	I-2
Q09	I-2	D13	F-5
		D15	F-2
		D16	F-2

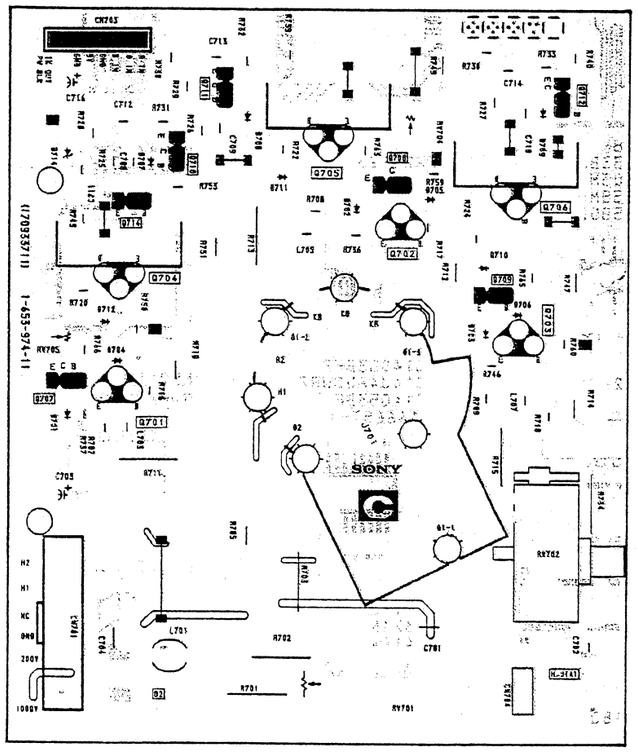
Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

Schematic diagram

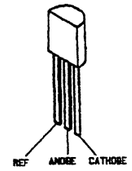
← C board

– C BOARD –

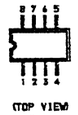


5-4. SEMICONDUCTORS

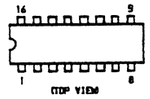
AN1431T



BA4558F
NJM2233BM
NJM2903M
NJM4558M-T2
μPC4558G2

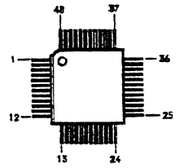


CXA1526P

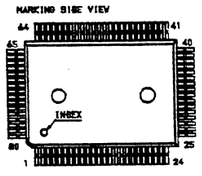


CXA1855S

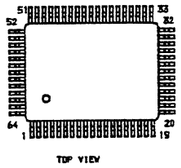
CXD2018Q



CXD2024Q



CXP8534A-SV4918



CX20125

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MC14046BDWRZ
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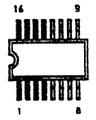

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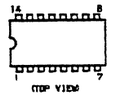

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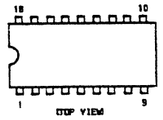

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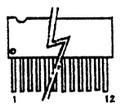
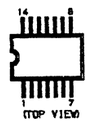


MC74F08M



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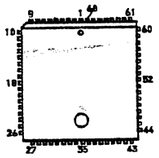

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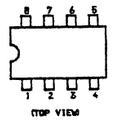

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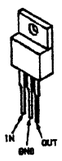
NJM7809FA



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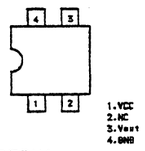

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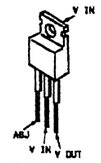

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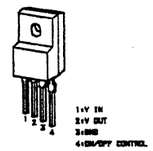

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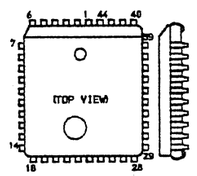

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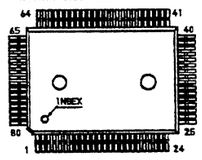

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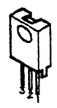

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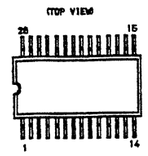
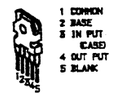
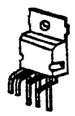


STR83159



STV9379



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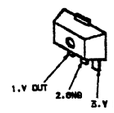

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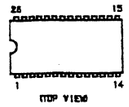

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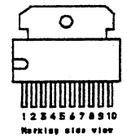
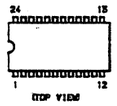


TDA8443B



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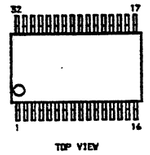

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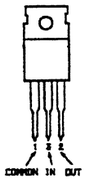

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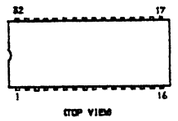

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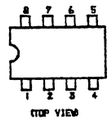
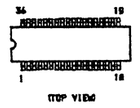
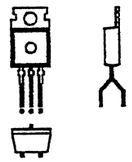


ZA2970-26DTR



BF550
DTA114EK
DTA114TK
DTC114EK
DTC124EK
DTC144EK
2SA1037K
2SA1162G
2SC2412K
2SC2712-YG

IRFIBC30G-LF



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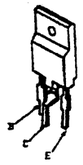


IRF614
2SA1837
2SD2012

2SA1091
2SD2551

2SA1175-HFE
2SA1309A
2SC2785-HFE
2SC3311A

2SB734-34
2SC3733
2SD774-34

2SC2611
2SC2688-LK
2SC3840K

2SC3997-YB

2SC4793 (T126)
2SK940 (TPE6)

BAS16
BBY40
DA204K
1SS226

DAN202K

DAP202K

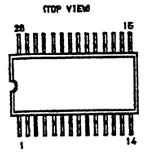
DD52RC

D1NL20
EGP20G
EL1Z
GP08DPKG23
GP08D
RGP10GPKG23
RGP15GPKG23

DEMRRRRRRFF1

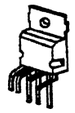
KV-W28MH11/W28MN11
KV-W32MH11/W32MN11
RM-850

SÐA9187-2XGEG
SÐA9188-3XGEG
µPÐ6456G5-640-E2

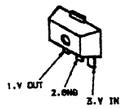


STR83159

STV9379



S-80743AL-A7-S



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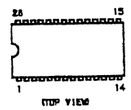

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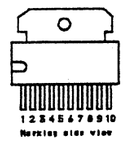
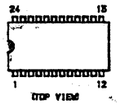
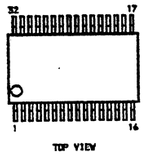


TÐA8443B



TÐA8755T-T



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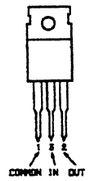

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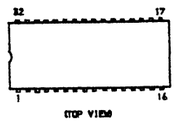

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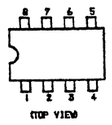
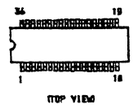


ZA2970-26ÐTR



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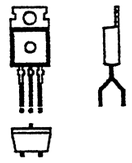
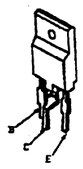
ÐTA114TK
ÐTC114EK
ÐTC124EK
ÐTC144EK
2SA1037K
2SA1162G
2SC2412K
2SC2712-YG

IRFIBC30G-LF



IRFI744G-LF



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2SD2551

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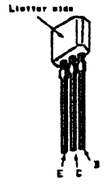
2SA1309A
2SC2785-HFE
2SC3311A



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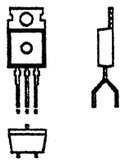
2SC3733
2SÐ774-34

2SC2611
2SC2688-LK
2SC3840K

2SC3997-YB



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2SK940 (TPE6)

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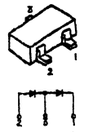
1SS226



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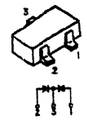

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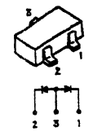
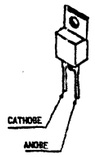


ÐÐ52RC



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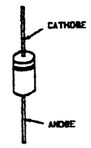
GP08Ð
RGP10GPKG23
RGP15GPKG23



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ERA38-06
MTZJ-T-77-15
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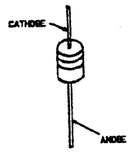
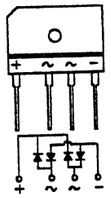
RÐ3.9ESB2
RÐ33ESB1
RÐ33F-B1
RÐ5.1ESB1
RÐ7.5ESB2
RÐ9.1ESB
RÐ9.1ESL
1SS119



Ð4SB60L
RBA402L
RBA406B



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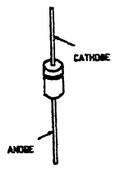
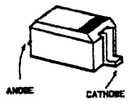
ERB24-06ÐTP1
RGP02-20EL-6394
S2LA20F

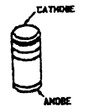


FMG-36S-LF024-104

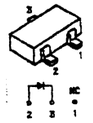
MA110



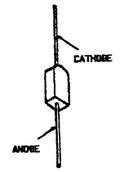
MA3051L-TX



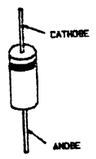
MA3047M-TX
MA3056
MA3068M
MA3075T
MA3180M-TX
MA3360-M
RÐ15M-B2
RÐ2.0MB
RÐ36M-B
RÐ5.1M-B2
RÐ5.6M-B2
RÐ6.8M-B2



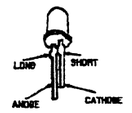
RM11C



Ru-3AM



TF541S (Ð102)
SEL1222R-C



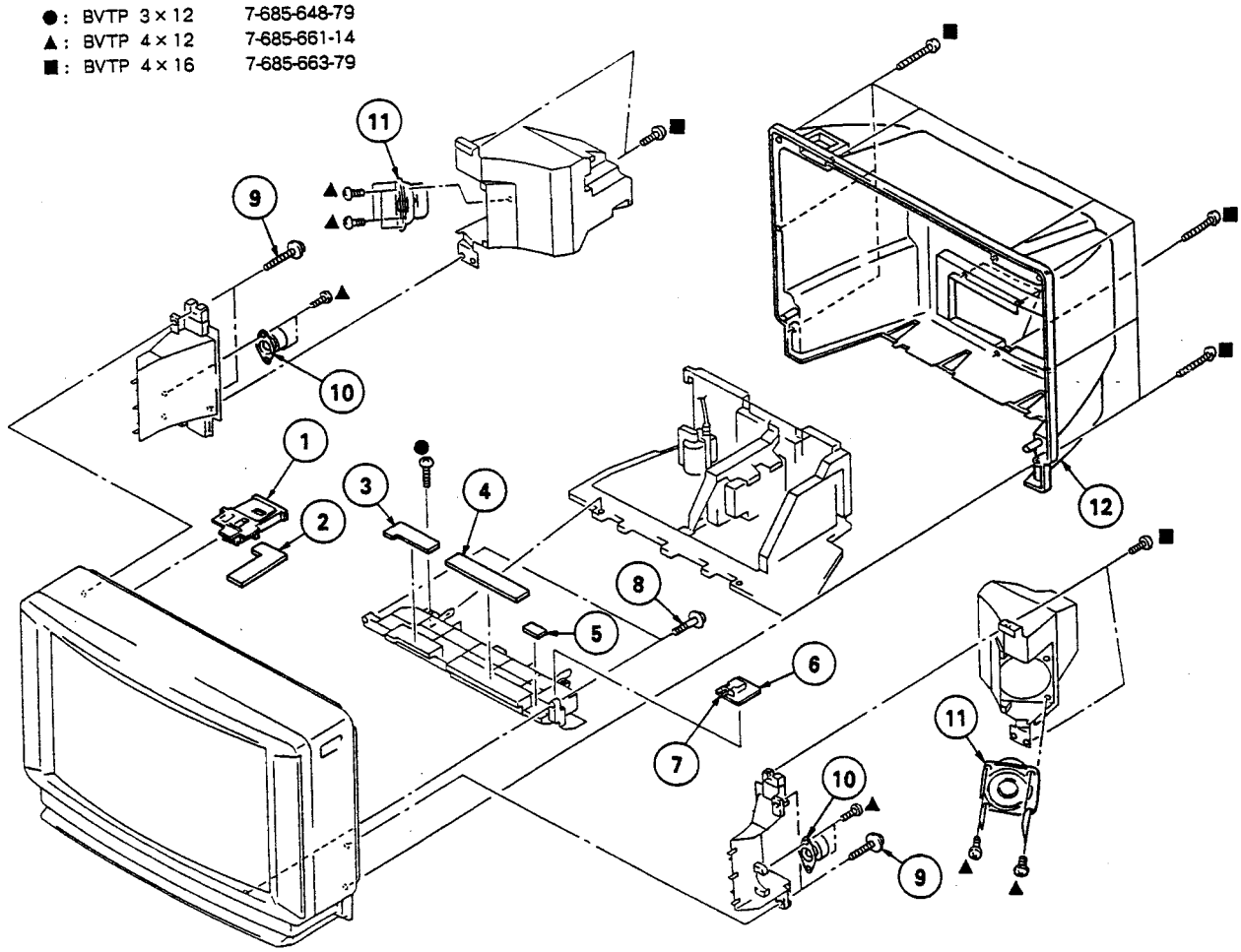
SECTION 6
EXPLODED VIEWS

NOTE :
- Items with on part number and on description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. REAR COVER AND SPEAKER (KV-W28MH11 / W28MN11)

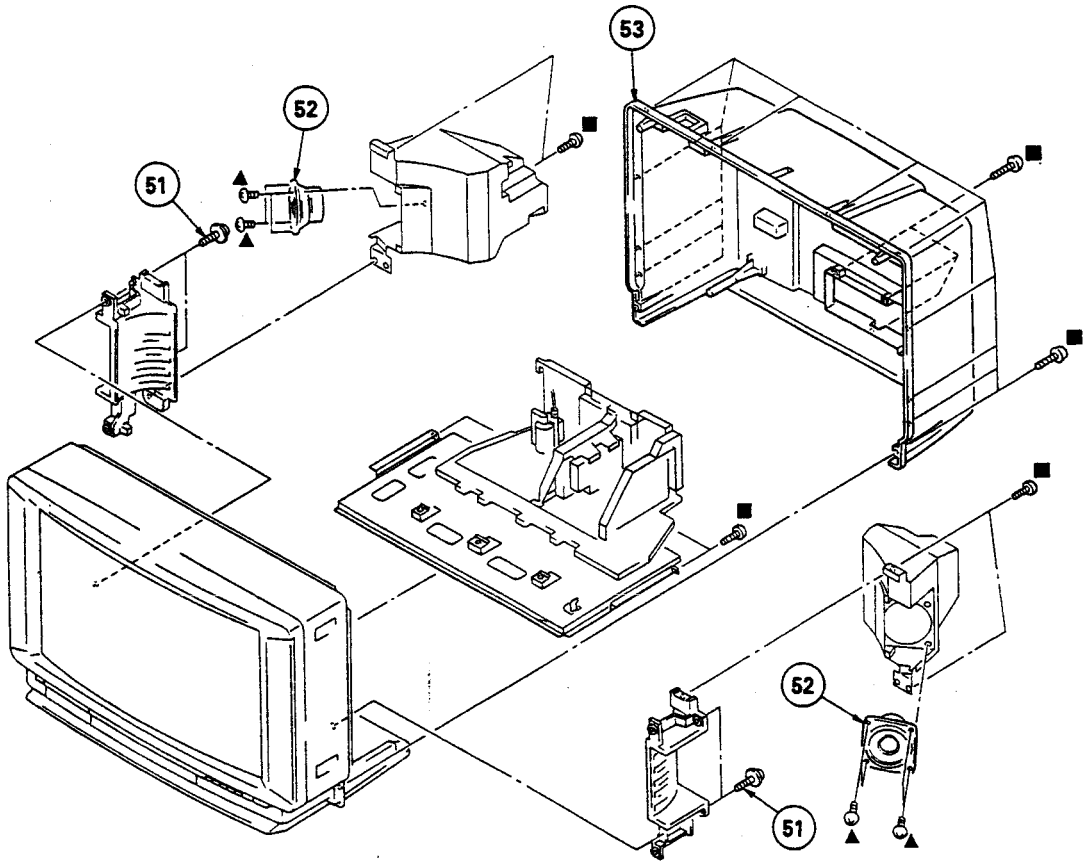
●: BVTP 3×12 7-685-648-79
▲: BVTP 4×12 7-685-661-14
■: BVTP 4×16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4032-292-1	BRACKET ASSY, H5	
2	*A-1372-075-A	H4 BOARD, COMPLETE (KV-W28MN11/MH11)	
3	*A-1372-068-A	H1 BOARD, COMPLETE (KV-W28MN11/MH11)	
4	*A-1372-069-A	H2 BOARD, COMPLETE (KV-W28MN11/MH11)	
5	*A-1372-067-A	H3 BOARD, COMPLETE (KV-W28MN11/MH11)	
6	*A-1241-173-A	F2 BOARD, COMPLETE	
7	⚠1-521-433-11	SWITCH, PUSH (AC POWER)	
8	4-319-520-11	SCREW, SPECIAL (+PW4X30)	
9	4-384-096-01	SCREW (4X16), TAPPING, +P	
10	1-504-121-51	SPEAKER (5CM)	
11	1-504-771-11	SPEAKER (12CM)	
12	4-042-194-21	COVER, REAR	

6-2. REAR COVER AND SPEAKER (KV-W32MH11 / W32MN11)

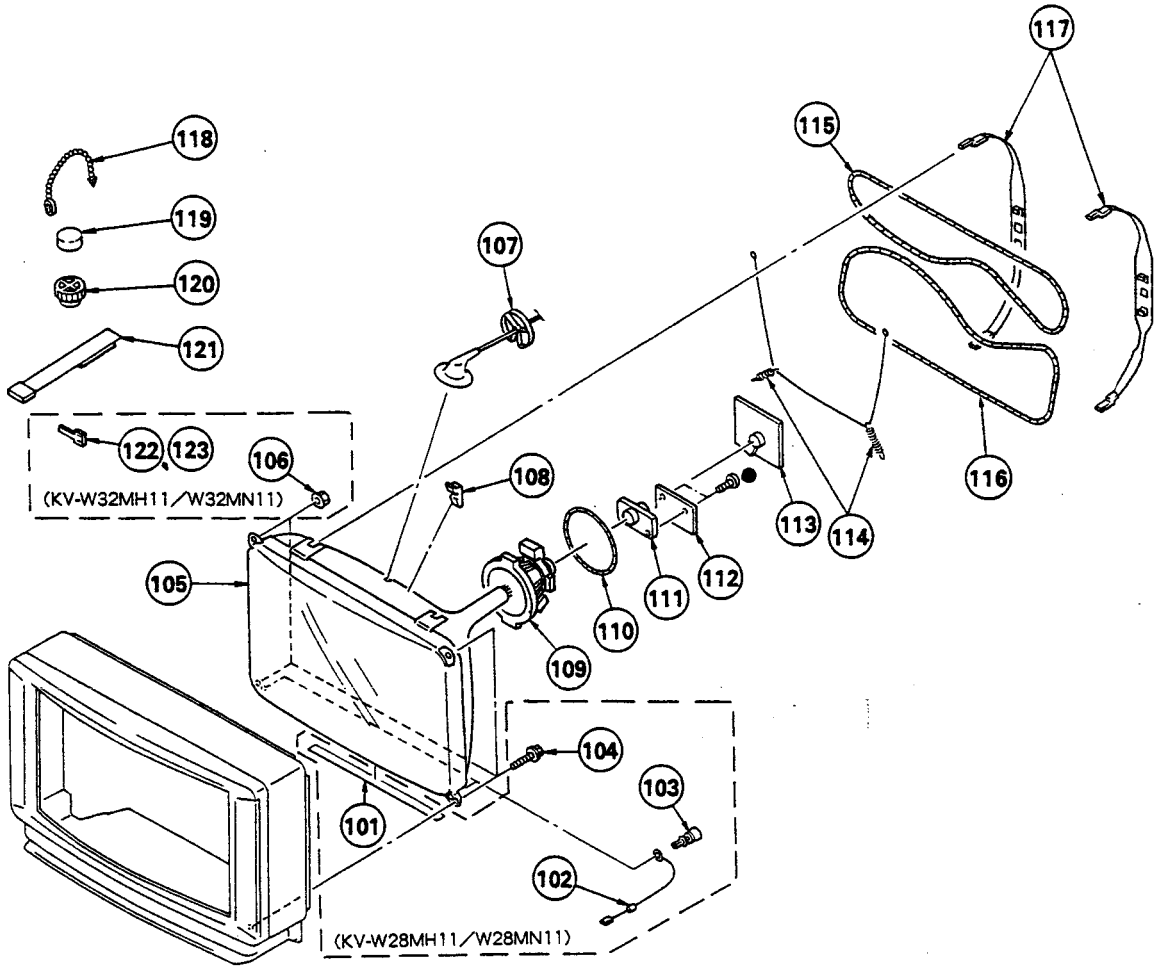
▲: BVTP 4 × 12 7-685-661-14
■: BVTP 4 × 16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
51	4-384-096-01	SCREW (4X16), TAPPING, +P	
52	1-504-771-11	SPEAKER (12CM)	
53	4-045-067-01	COVER, REAR	

6-3. PICTURE TUBE

●: BVTP 3 × 12 7-685-648-79

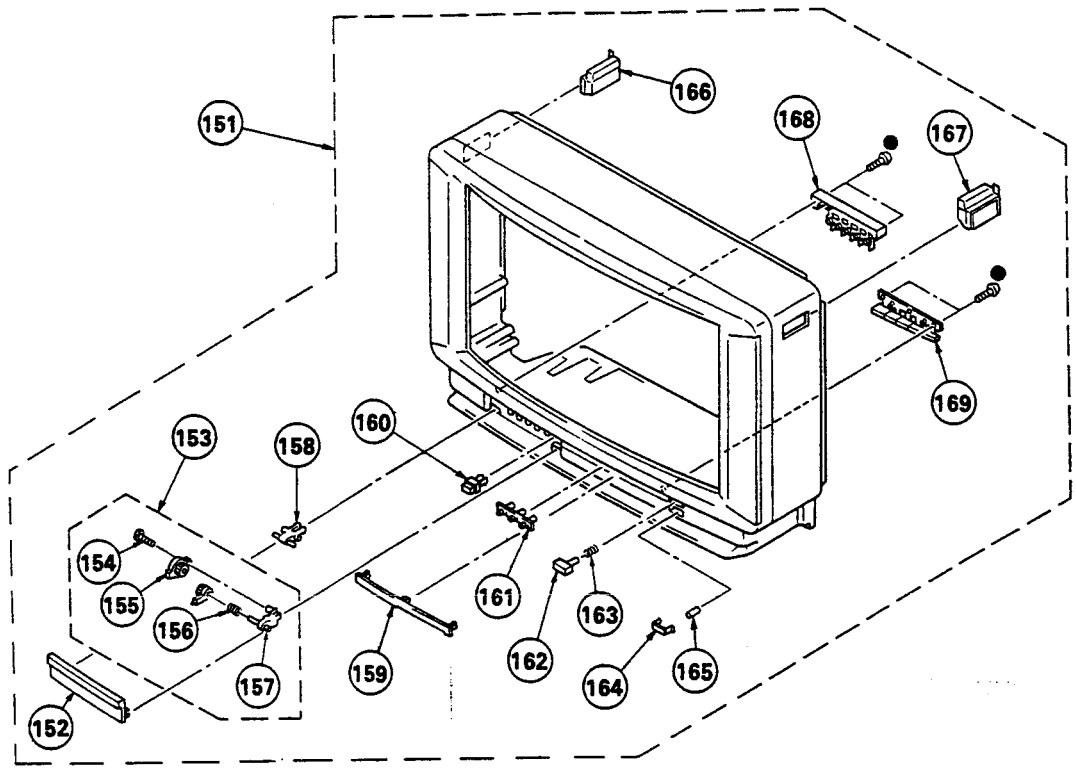


REF.NO.	PART NO.	DESCRIPTION	REMARK
101	4-391-833-01	CLOTH, PROTECTION	(KV-W28MN11/MH11)
102	1-900-071-31	CONNECTOR ASSY	(KV-W28MN11/MH11)
103	4-386-618-01	RIVET, T TYPE	(KV-W28MN11/MH11)
104	4-390-505-01	SCREW (7), TAPPING	(KV-W28MN11/MH11)
105	⚠ 8-737-756-05	PICTURE TUBE 28CC11 (W66LCA010X)	(KV-W28MN11/MH11)
105	⚠ 8-735-023-05	PICTURE TUBE 32CC11 (W76KXS010X)	(KV-W32MN11/MH11)
106	4-387-204-01	NUT, SPECIAL, CRT	(KV-W32MN11/MH11)
107	*3-704-372-01	HOLDER, HV CABLE	
108	3-704-495-01	SPACER, DY	
109	⚠ 8-451-449-11	DY Y28CIC2(MEY)	(KV-W28MN11/MH11)
	⚠ 8-451-460-11	DY Y32CIC2M	(KV-W32MN11/MH11)
110	1-452-724-11	COIL, NA ROTATION (RT-165)	
111	⚠ 1-452-616-11	NECK ASSY, PICTURE TUBE (NA323)	
112	*A-1342-258-A	VM BOARD, COMPLETE	
113	*A-1331-391-A	C BOARD, COMPLETE	(KV-W28MN11/MH11)
	*A-1331-389-A	C BOARD, COMPLETE	(KV-W32MN11/MH11)

REF.NO.	PART NO.	DESCRIPTION	REMARK
114	4-369-318-00	SPRING, TENSION	
115	⚠ 1-409-951-11	COIL, DEMAGNETIZATION	(KV-W28MN11/MH11)
	⚠ 1-409-953-11	COIL, DEMAGNETIZATION	(KV-W32MN11/MH11)
116	⚠ 1-409-952-11	COIL, DEMAGNETIZATION	(KV-W28MN11/MH11)
	⚠ 1-409-954-11	COIL, DEMAGNETIZATION	(KV-W32MN11/MH11)
117	*4-045-294-01	HOLDER, DGC	(KV-W32MN11/MH11)
	4-040-324-01	HOLDER, DGC	(KV-W28MN11/MH11)
118	4-308-870-00	CLIP, LEAD WIRE	
119	1-452-032-00	MAGNET, DISK; 10MM ϕ	
120	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
121	X-4030-584-1	PERMALLOY ASSY, CORRECTION	(KV-W28MN11/MH11)
121	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	(KV-W32MN11/MH11)
122	4-034-272-01	PLATE, CORRECTION, TLV	(KV-W32MN11/MH11)
123	4-034-272-11	PLATE, CORRECTION, TLV	(KV-W32MN11/MH11)

6-4. CABINET (WITH BEZEL) (KV-W28MH11 / W28MN11)

●: BVTP 3 × 12 7-685-648-79

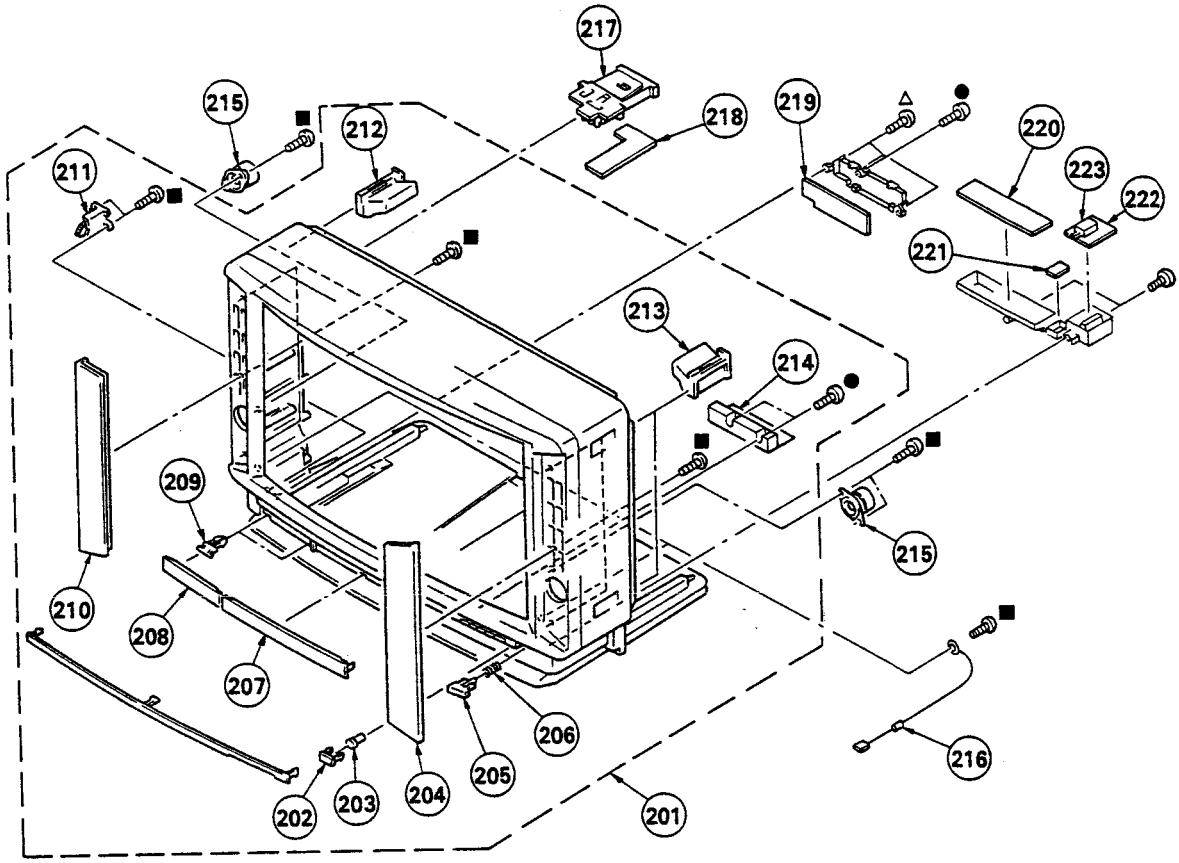


REF.NO.	PART NO.	DESCRIPTION	REMARK
151	X-4032-291-1	BEZNET ASSY	152-169
152	4-042-193-41	DOOR	
153	X-4031-244-1	DAMPER ASSY	154-157
154	4-033-184-01	SCREW, SPECIAL	
155	4-036-880-11	DAMPER	
156	4-041-016-01	SPRING	
157	4-041-017-01	SHAFT (MAIN), DAMPER DOOR	
158	3-703-035-12	SHAFT, LID	
159	4-042-478-11	PANEL, CONTROL	
160	4-042-192-01	CATCHER, PUSH	

REF.NO.	PART NO.	DESCRIPTION	REMARK
161	4-042-189-11	GUIDE, LIGHT	
162	4-042-187-21	BUTTON, POWER	
163	4-042-593-01	SPRING, COMPRESSION	
164	4-042-190-01	WINDOW, ORNAMENTAL	
165	*4-389-517-01	GUIDE (R), LIGHT	
166	4-037-968-03	HOLDER (L)	
167	4-037-969-03	HOLDER (R)	
168	4-042-186-01	BUTTON, SUB MENU	
169	4-042-185-01	BUTTON, MAIN MENU	

6-5. CABINET (WITH BEZEL) (KV-W32MH11 / W32MN11)

● : BVTP 3 × 12 7-685-648-79
■ : BVTP 4 × 16 7-685-663-79
△ : BV 3 × 25 7-685-152-19

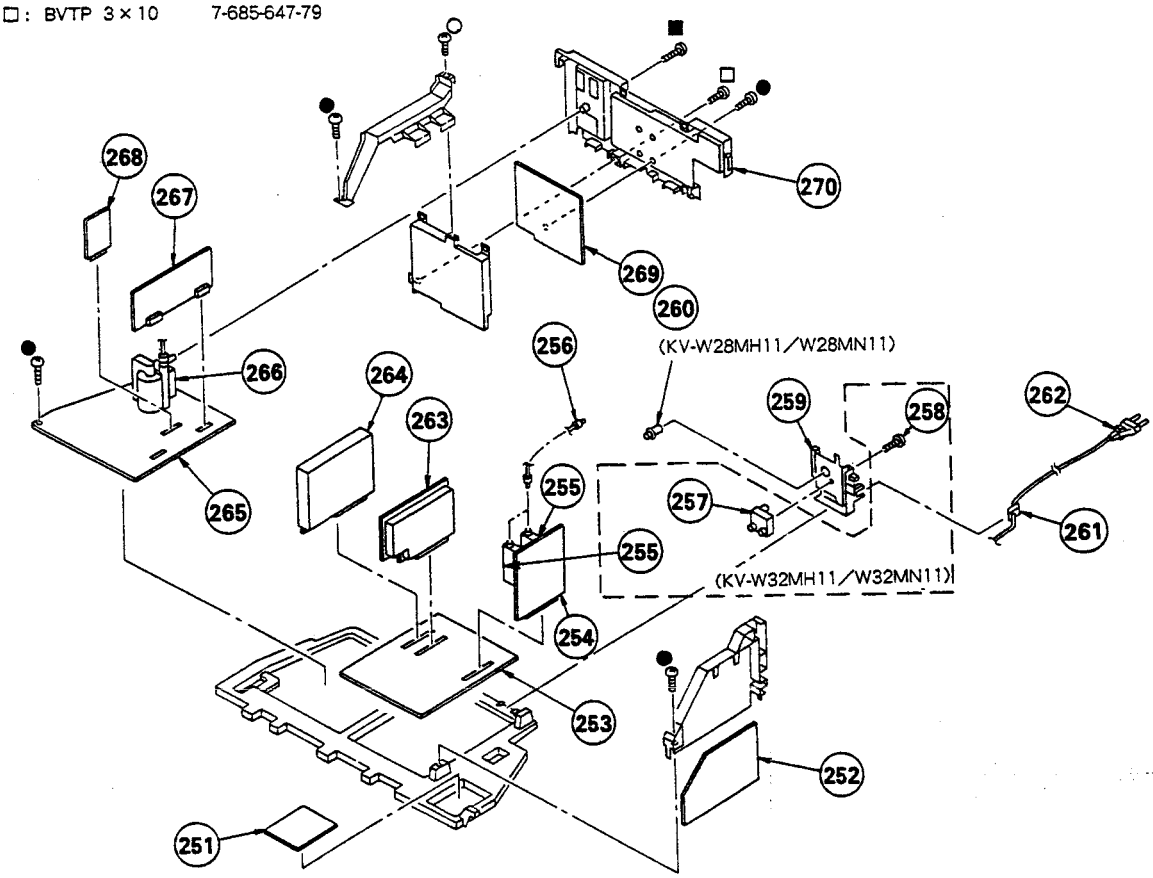


The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
201	X-4032-297-1	BEZNET ASSY	202-214
202	4-036-981-01	FILTER, RAY CATCHER	
203	4-042-927-01	GUIDE, LIGHT	
204	X-4032-296-1	GRILLE (R) ASSY, SPEAKER	
205	4-036-976-31	BUTTOM, POWER	
206	4-042-593-01	SPRING, COMPRESSION	
207	4-036-998-21	GRILLE, CENTER SP	
208	X-4032-294-1	DOOR ASSY	
209	3-703-035-12	SHAFT, LID	
210	X-4032-295-1	GRILLE (L) ASSY, SPEAKER	
211	4-036-990-01	DAMPER	
212	4-037-025-11	HOLDER (L)	
213	4-037-030-11	HOLDER (R)	
214	4-047-157-01	SUPPORTER	
215	1-504-121-51	SPEAKER (5CM)	
216	1-900-138-08&	CONNECTOR ASSY	(KV-W32MN11/MH11)
217	X-4032-292-1	BRACKET ASSY, H5	
218	*A-1372-073-A	H4 BOARD, COMPLETE	(KV-W32MN11/MH11)
219	*A-1372-070-A	H1 BOARD, COMPLETE	(KV-W32MN11/MH11)
220	*A-1372-071-A	H2 BOARD, COMPLETE	(KV-W32MN11/MH11)
221	*A-1372-072-A	H3 BOARD, COMPLETE	(KV-W32MN11/MH11)
222	*A-1241-173-A	F2 BOARD, COMPLETE	
223	⚠1-571-433-11	SWITCH, PUSH (AC POWER)	

6-6. CHASSIS

●: BVTP 3×12 7-685-648-79
■: BVTP 4×16 7-685-663-79
○: P 3×8 7-682-548-04
□: BVTP 3×10 7-685-647-79



The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
251	*A-1380-480-A	K BOARD, COMPLETE	(KV-W28MN11/MH11)
	*A-1380-478-A	K BOARD, COMPLETE	(KV-W32MN11/MH11)
252	*A-1241-174-A	F1 BOARD, COMPLETE	
253	*A-1297-418-A	A BOARD, COMPLETE	
254	*A-1297-417-A	A2 BOARD, COMPLETE	(KV-W28MN11/MH11)
	*A-1297-419-A	A2 BOARD, COMPLETE	(KV-W32MN11/MH11)
255	⚠8-598-270-00	TUNER, ET BTP-RG421	
256	*1-558-539-21	CABLE, P-P	(KV-W28MN11/MH11)
	*1-555-110-00	CABLE, P-P	(KV-W32MN11/MH11)
257	1-251-249-11	DISTRIBUTOR, RF	(KV-W32MN11/MH11)
258	4-379-611-01	SCREW (M3X8), +B	(KV-W32MN11/MH11)
259	4-046-739-11	BRACKET, SPLITTER	(KV-W28MN11/MH11)
	4-046-739-11	BRACKET, SPLITTER	(KV-W32MN11/MH11)
260	1-563-204-11	SOCKET, ANTENNA (PAL/SECAM)	(KV-W28MN11/MH11)
261	4-389-778-01	HOLDER, AC CORD	
262	⚠1-574-062-52	CORD, POWER (6.0A/250V)	(KV-W28MH11/W32MH11)
262	⚠1-696-401-11	CORD, POWER (6.0A/250V)	(KV-W28MN11/W32MN11)
263	*A-1135-807-A	B BOARD, COMPLETE	
264	*A-1275-126-A	Q BOARD, COMPLETE	
265	*A-1346-262-A	D BOARD, COMPLETE	(KV-W28MN11/MH11)
	*A-1346-266-A	D BOARD, COMPLETE	(KV-W32MN11/MH11)
266	X-4032-476-1	TRANSFORMER ASSY, FLYBACK (NX-3041/J1B)	
267	*A-1341-842-A	D1 BOARD, COMPLETE	(KV-W28MN11/MH11)
	*A-1341-850-A	D1 BOARD, COMPLETE	(KV-W32MN11/MH11)
268	*A-1346-265-A	D2 BOARD, COMPLETE	
269	*A-1388-176-A	J BOARD, COMPLETE	
270	4-046-735-01	BRACKET, J PC BOARD	

B

SECTION 7
ELECTRICAL PARTS LIST

NOTE :

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

- The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION		REMARK
	*A-1135-807-A	B BOARD, COMPLETE **********		
	3-741-396-01	INSULATOR		
		<CAPACITOR>		
C1301	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1302	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1303	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1304	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1305	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1306	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1307	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1308	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C1309	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1310	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1311	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1312	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C1313	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C1314	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C1316	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1317	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1318	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1319	1-104-664-11	ELECT 47MF	20%	25V
C1320	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1321	1-163-239-11	CERAMIC CHIP 33PF	5%	50V
C1322	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1323	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1324	1-163-085-00	CERAMIC CHIP 2PF	0.25PF	50V
C1325	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1326	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C1327	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C1328	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C1329	1-126-933-11	ELECT 100MF	20%	16V
C1330	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1331	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1332	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1333	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1334	1-126-375-11	ELECT 100MF	20%	16V
C1335	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1336	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1337	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1338	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1339	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1340	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1341	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1342	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1343	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1344	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1345	1-126-966-11	ELECT 33MF	20%	16V
C1346	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1347	1-126-933-11	ELECT 100MF	20%	16V
C1348	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1349	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1350	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1351	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C1352	1-124-126-00	ELECT 47MF	20%	16V
C1353	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1354	1-163-237-11	CERAMIC CHIP 27PF	5%	50V
C1355	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1356	1-124-126-00	ELECT 47MF	20%	16V
C1359	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1360	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1361	1-164-346-11	CERAMIC CHIP 1MF		16V
C1362	1-163-131-00	CERAMIC CHIP 390PF	5%	50V
C1363	1-163-001-11	CERAMIC CHIP 220PF	10%	50V
C1364	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1401	1-126-375-11	ELECT 100MF	20%	16V
C1402	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1403	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1404	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1405	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1407	1-124-126-00	ELECT 47MF	20%	16V
C1408	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1409	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C1410	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C1411	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C1412	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C1413	1-163-239-11	CERAMIC CHIP 33PF	5%	50V
C1414	1-163-239-11	CERAMIC CHIP 33PF	5%	50V
C1415	1-163-239-11	CERAMIC CHIP 33PF	5%	50V
C1417	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1418	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1419	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1420	1-163-245-11	CERAMIC CHIP 56PF	5%	50V
C1421	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1422	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1423	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1424	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1425	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1426	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1431	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C1432	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C1433	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C1434	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1435	1-126-375-11	ELECT 100MF	20%	16V
C1436	1-126-375-11	ELECT 100MF	20%	16V
C1437	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1438	1-126-375-11	ELECT 100MF	20%	16V
C1439	1-126-933-11	ELECT 100MF	20%	16V
C1440	1-163-038-91	CERAMIC CHIP 0.1MF		25V

B

REF.NO.	PART NO.	DESCRIPTION		REMARK
C1441	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1442	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1443	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1444	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1445	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1446	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1447	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1448	1-164-346-11	CERAMIC CHIP 1MF		16V
C1449	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1450	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1451	1-126-233-11	ELECT 22MF	20%	50V
C1452	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1453	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1454	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C1457	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1458	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1459	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1460	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1461	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1462	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C1463	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C1464	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1465	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1466	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1468	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1469	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1470	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1471	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C1472	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V
C1473	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1474	1-164-346-11	CERAMIC CHIP 1MF		16V
C1475	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C1476	1-124-903-11	ELECT 1MF	20%	50V
C1477	1-163-135-00	CERAMIC CHIP 560PF	5%	50V
C1478	1-126-375-11	ELECT 100MF	20%	16V
C1479	1-163-257-11	CERAMIC CHIP 180PF	5%	50V
C1480	1-104-664-11	ELECT 47MF	20%	25V
C1501	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1502	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C1503	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C1504	1-136-481-11	FILM 0.0022MF	2%	50V
C1506	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1507	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1508	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1509	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V
C1514	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1515	1-126-163-11	ELECT 4.7MF	20%	50V
C1516	1-126-233-11	ELECT 22MF	20%	50V
C1517	1-126-387-11	ELECT 2.2MF	20%	50V
C1518	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C1519	1-126-375-11	ELECT 100MF	20%	16V
C1520	1-164-005-11	CERAMIC CHIP 0.47MF		25V

<CONNECTOR>

CN1301	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P	

<DIODE>

D1301	8-719-401-41	DIODE MA3051L-TX	
D1302	8-719-914-43	DIODE DAN202K	
D1303	8-719-914-44	DIODE DAP202K	
D1304	8-719-914-43	DIODE DAN202K	
D1305	8-719-914-42	DIODE DA204K	
D1307	8-719-404-46	DIODE MA110	
D1309	8-719-404-46	DIODE MA110	
D1401	8-719-401-41	DIODE MA3051L-TX	
D1402	8-719-914-44	DIODE DAP202K	
D1501	8-719-401-41	DIODE MA3051L-TX	
D1502	8-719-106-17	DIODE RD6.8M-B2	

<FILTER>

FL1301	1-236-164-11	ENCAPSULATED COMPONENT	
FL1302	1-239-848-21	FILTER, LOW PASS	
FL1303	1-239-848-21	FILTER, LOW PASS	
FL1304	1-239-848-21	FILTER, LOW PASS	
FL1401	1-236-071-41	ENCAPSULATED COMPONENT	
FL1402	1-236-071-41	ENCAPSULATED COMPONENT	
FL1403	1-236-071-41	ENCAPSULATED COMPONENT	
FL1404	1-236-071-41	ENCAPSULATED COMPONENT	
FL1405	1-236-071-41	ENCAPSULATED COMPONENT	
FL1406	1-236-071-41	ENCAPSULATED COMPONENT	
FL1407	1-236-071-41	ENCAPSULATED COMPONENT	

<IC>

IC1301	8-759-701-58	IC NJM78M08FA	
IC1302	8-759-189-90	IC TDA9145/N2B	
IC1303	8-759-288-85	IC TDA4665T-T	
IC1304	8-752-352-21	IC CXD2024Q	
IC1305	8-759-289-29	IC UPD6456GS-640-E2	
IC1401	8-759-183-36	IC TDA8443B	
IC1404	8-759-192-90	IC SDA9188-3XGEG	
IC1405	8-759-248-15	IC SDA9187-2XGEG	
IC1406	8-759-288-85	IC TDA4665T-T	
IC1407	8-759-183-35	IC TDA9160A	
IC1408	8-759-701-58	IC NJM78M08FA	
IC1501	8-759-181-19	IC TDA2579B	

<COIL>

L1302	1-408-406-00	INDUCTOR	5.6UH
L1303	1-408-401-00	INDUCTOR	2.2UH
L1304	1-408-405-00	INDUCTOR	4.7UH
L1305	1-408-405-00	INDUCTOR	4.7UH
L1306	1-408-405-00	INDUCTOR	4.7UH
L1307	1-408-609-41	INDUCTOR	33UH
L1401	1-408-418-00	INDUCTOR	56UH
L1402	1-408-418-00	INDUCTOR	56UH

<TRANSISTOR>

Q1301	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1303	8-729-901-01	TRANSISTOR DTC144EK	
Q1304	8-729-901-00	TRANSISTOR DTC124EK	
Q1305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1306	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1307	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1308	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1309	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1310	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1311	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1312	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1314	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1315	8-729-216-22	TRANSISTOR 2SA1162-G	

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1316	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1317	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1318	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1319	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1320	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1323	8-729-901-01	TRANSISTOR DTC144EK	
Q1324	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1325	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1326	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1401	8-729-900-53	TRANSISTOR DTC114EK	
Q1402	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1403	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1404	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1405	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1407	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1408	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1409	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1410	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1411	8-729-901-01	TRANSISTOR DTC144EK	
Q1412	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1413	8-729-900-53	TRANSISTOR DTC114EK	
Q1414	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1415	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1416	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1417	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1418	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1421	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1422	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1423	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1424	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1425	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1501	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1502	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1505	8-729-901-04	TRANSISTOR DTA114EK	
Q1506	8-729-900-53	TRANSISTOR DTC114EK	
Q1507	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1508	8-729-900-53	TRANSISTOR DTC114EK	

<RESISTOR>

R1301	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1302	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1303	1-216-039-00	METAL GLAZE	390	5%	1/10W
R1304	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R1305	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1306	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1307	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1308	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R1309	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1310	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1311	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1312	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1313	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1315	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R1316	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1317	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1318	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1320	1-216-035-00	METAL GLAZE	270	5%	1/10W
R1321	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1322	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R1323	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1324	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1325	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1326	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1327	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R1328	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1330	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R1332	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1333	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R1334	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1335	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R1336	1-216-043-00	METAL GLAZE	560	5%	1/10W
R1337	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R1338	1-216-043-00	METAL GLAZE	560	5%	1/10W
R1339	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R1340	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1341	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R1342	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R1343	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R1344	1-216-295-00	CONDCTOR, CHIP			
R1345	1-216-295-00	CONDCTOR, CHIP			
R1347	1-216-295-00	CONDCTOR, CHIP			
R1349	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R1350	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R1351	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R1352	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1353	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R1354	1-216-035-00	METAL GLAZE	270	5%	1/10W
R1357	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1358	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R1359	1-216-043-00	METAL GLAZE	560	5%	1/10W
R1360	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R1361	1-216-637-11	METAL CHIP	270	0.50%	1/10W
R1362	1-216-635-11	METAL CHIP	220	0.50%	1/10W
R1363	1-216-295-00	CONDCTOR, CHIP			
R1364	1-216-037-00	METAL GLAZE	330	5%	1/10W
R1365	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R1366	1-216-043-00	METAL GLAZE	560	5%	1/10W
R1367	1-216-039-00	METAL GLAZE	390	5%	1/10W
R1368	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R1369	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1370	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R1371	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1372	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R1373	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1374	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1375	1-216-666-11	METAL CHIP	4.3K	0.50%	1/10W
R1376	1-208-784-11	METAL CHIP	1.2K	0.50%	1/10W
R1377	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1378	1-216-295-00	CONDCTOR, CHIP			
R1380	1-216-035-00	METAL GLAZE	270	5%	1/10W
R1381	1-216-027-00	METAL GLAZE	120	5%	1/10W
R1384	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1385	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R1386	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R1387	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R1388	1-216-039-00	METAL GLAZE	390	5%	1/10W
R1389	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1390	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1391	1-249-417-11	CARBON	1K	5%	1/4W
R1401	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1402	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R1403	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R1404	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R1405	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1406	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1407	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W

B **F2**

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1408	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1409	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1410	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1411	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1412	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1413	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1414	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1415	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1416	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1417	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1418	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1419	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1420	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1421	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1422	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1424	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1425	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1426	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R1427	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1428	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1429	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1430	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1431	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1432	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1433	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1434	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1435	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1436	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1437	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1438	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1439	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1440	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1441	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1442	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1443	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1444	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1445	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1446	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R1447	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1448	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1449	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1450	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1451	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1452	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1453	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1454	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1455	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1456	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1457	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1459	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1460	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1461	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1462	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1463	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1464	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1469	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1475	1-216-295-00	CONDCTOR, CHIP				
R1476	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1477	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1478	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1479	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1480	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1481	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1482	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1483	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1484	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1485	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1486	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1487	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1501	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R1502	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1503	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1504	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1505	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1507	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1508	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1509	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1510	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1511	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1523	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1524	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1525	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1526	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1527	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1528	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1529	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1530	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1531	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R1532	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1832	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1833	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1834	1-216-009-00	METAL GLAZE	22	5%	1/10W	

<VARIABLE RESISTOR>

RV1501	1-241-763-11	RES, ADJ, CERMET 4.7K

<CRYSTAL>

X1302	1-760-191-11	VIBRATOR, CRYSTAL
X1303	1-760-190-11	VIBRATOR, CRYSTAL
X1401	1-760-095-21	VIBRATOR, CRYSTAL
X1402	1-760-190-11	VIBRATOR, CRYSTAL
X1403	1-760-191-11	VIBRATOR, CRYSTAL

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	*A-1241-173-A	F2 BOARD, COMPLETE
		**********
	1-533-223-11	CLIP, FUSE

<CONNECTOR>

CN3601	*1-580-844-11	PIN, CONNECTOR (POWER)
CN3602	*1-695-292-11	PIN, CONNECTOR (POWER)

<FUSE>

F3601⚠	1-532-505-31	FUSE (5.0A/250V)

<SWITCH>

S3601⚠	1-571-433-12	SWITCH, PUSH (AC POWER)

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The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1241-174-A	F1 BOARD, COMPLETE **********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C1601⚠	1-104-706-51	FILM	0.22MF	20%	250V
C1602	1-136-601-11	FILM	0.01MF	10%	630V
C1603	1-136-601-11	FILM	0.01MF	10%	630V
C1609⚠	1-104-706-51	FILM	0.22MF	20%	250V
C1611	1-161-742-00	CERAMIC	0.0022MF	20%	400V
C1612⚠	1-161-830-91	CERAMIC	0.0047MF		500V
C1613⚠	1-161-830-91	CERAMIC	0.0047MF		500V
C1614	1-161-830-00	CERAMIC	0.0047MF		500V
C1615	1-161-830-00	CERAMIC	0.0047MF		500V
C1616	1-136-207-11	FILM	0.047MF	10%	400V
C1617	1-136-187-11	MYLAR	0.047MF	5%	250V
C1618	1-136-165-00	FILM	0.1MF	5%	50V
C1619	1-107-667-11	ELECT	2.2MF	20%	400V
C1620	1-124-122-11	ELECT	100MF	20%	50V
C1621	1-136-165-00	FILM	0.1MF	5%	50V
C1622	1-162-318-11	CERAMIC	0.001MF	10%	500V
C1624	1-104-350-11	ELECT	1000MF	20%	250V
C1625	1-104-350-11	ELECT	1000MF	20%	250V
C1626	1-124-903-11	ELECT	1MF	20%	50V
		<CONNECTOR>			
CN1601*	1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P			
CN1602*	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
CN1603*	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
CN1604*	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P			
CN1605	1-695-915-11	TAB (CONTACT)			
CN1608	1-766-964-11	PIN, CONNECTOR (PC BOARD) 6P			
CN1609*	1-564-507-11	PLUG, CONNECTOR 4P			
		<DIODE>			
D1601⚠	8-719-510-53	DIODE D4SB60L			
D1602	8-719-049-49	DIODE TF541S			
D1603	8-719-110-18	DIODE RD10ESB3			
D1604	8-719-304-63	DIODE RM11C			
D1605	8-719-979-58	DIODE EGP10D			
D1606	8-719-911-19	DIODE 1SS119			
D1607	8-719-304-63	DIODE RM11C			
		<FERRITE BEAD>			
FB1601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH			
		<IC>			
IC1601⚠	8-749-923-94	IC STR81159A			
		<COIL>			
L1601	1-412-525-21	INDUCTOR	10UH		
		<TRANSISTOR>			
Q1601	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1602	8-729-119-78	TRANSISTOR 2SC2785-HFE			

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R1603	1-247-289-00	CARBON	8.2M	5% 1W	
R1604	1-219-363-11	FUSIBLE	5.6	5% 5W	F
R1605	1-249-416-11	CARBON	820	5% 1/4W	F
R1606	1-249-416-11	CARBON	820	5% 1/4W	F
R1607	1-260-300-11	CARBON	4.7	5% 1/2W	
R1608	1-214-925-00	CARBON	330K	5% 1/2W	
R1609	1-214-925-00	CARBON	330K	5% 1/2W	
R1610	1-216-425-11	METAL OXIDE	56	5% 1W	F
R1611	1-249-429-11	CARBON	10K	5% 1/4W	
R1612	1-249-429-11	CARBON	10K	5% 1/4W	
R1613	1-249-417-11	CARBON	1K	5% 1/4W	F
R1614	1-215-928-11	METAL OXIDE	68K	5% 3W	F
		<RELAY>			
RY1601⚠	1-755-018-11	RELAY			
		<TRANSFORMER>			
T1602⚠	1-421-944-11	TRANSFORMER, LINE FILTER			
		<THERMISTOR>			
TH1601⚠	1-809-827-21	THERMISTOR, POSITIVE			
	*A-1275-126-A	Q BOARD, COMPLETE **********			
		<CAPACITOR>			
C01	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C02	1-124-927-11	ELECT	4.7MF	20%	50V
C03	1-124-927-11	ELECT	4.7MF	20%	50V
C04	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C05	1-162-568-11	CERAMIC CHIP	0.33MF	10%	16V
C06	1-126-964-11	ELECT	10MF	20%	50V
C07	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C08	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C09	1-104-664-11	ELECT	47MF	20%	25V
C10	1-124-927-11	ELECT	4.7MF	20%	50V
C11	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C12	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C13	1-164-346-11	CERAMIC CHIP	1MF		16V
C14	1-124-927-11	ELECT	4.7MF	20%	50V
C15	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C16	1-126-964-11	ELECT	10MF	20%	50V
C17	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C18	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C19	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C20	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C21	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C22	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C23	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C24	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C25	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C26	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C27	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C28	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C29	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C30	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V

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REF.NO.	PART NO.	DESCRIPTION		REMARK
C31	1-163-239-11	CERAMIC CHIP 33PF	5%	50V
C32	1-124-927-11	ELECT 4.7MF	20%	50V
C33	1-126-964-11	ELECT 10MF	20%	50V
C34	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C35	1-126-964-11	ELECT 10MF	20%	50V
C36	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C37	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C38	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C39	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C40	1-163-239-11	CERAMIC CHIP 33PF	5%	50V
C41	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C42	1-126-964-11	ELECT 10MF	20%	50V
C43	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C44	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C45	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C46	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C47	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C48	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C49	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C50	1-163-014-00	CERAMIC CHIP 0.0027MF	10%	50V
C51	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C52	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C53	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C54	1-126-964-11	ELECT 10MF	20%	50V
C55	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C56	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C57	1-163-237-11	CERAMIC CHIP 27PF	5%	50V
C59	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C61	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C62	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C63	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C64	1-124-927-11	ELECT 4.7MF	20%	50V
C65	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C66	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C67	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C68	1-126-964-11	ELECT 10MF	20%	50V
C69	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C70	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C71	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C72	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C73	1-163-014-00	CERAMIC CHIP 0.0027MF	10%	50V
C74	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C75	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C76	1-163-253-11	CERAMIC CHIP 120PF	5%	50V
C77	1-126-964-11	ELECT 10MF	20%	50V
C79	1-126-964-11	ELECT 10MF	20%	50V
C82	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C84	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V
C85	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C86	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C87	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C88	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C89	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C90	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C91	1-126-964-11	ELECT 10MF	20%	50V
C92	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C93	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C94	1-126-233-11	ELECT 22MF	20%	50V
C95	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C96	1-126-233-11	ELECT 22MF	20%	50V
C97	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C98	1-126-233-11	ELECT 22MF	20%	50V
C99	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1001	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1004	1-164-346-11	CERAMIC CHIP 1MF		16V
C1005	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1006	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1007	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1008	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1009	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1012	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1014	1-164-346-11	CERAMIC CHIP 1MF		16V
C1016	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1017	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C1018	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1019	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1020	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1022	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1023	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1024	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1025	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1026	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C1027	1-164-346-11	CERAMIC CHIP 1MF		16V
C1028	1-164-346-11	CERAMIC CHIP 1MF		16V

<CONNECTOR>

CN40	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P	

<DIODE>

D03	8-719-047-36	DIODE BBY40	
D04	8-719-047-37	DIODE BAS16	
D05	8-719-047-37	DIODE BAS16	
D06	8-719-047-37	DIODE BAS16	
D08	8-719-047-36	DIODE BBY40	
D09	8-719-047-37	DIODE BAS16	
D10	8-719-047-36	DIODE BBY40	
D11	8-719-047-37	DIODE BAS16	
D12	8-719-047-37	DIODE BAS16	
D13	8-719-105-91	DIODE RD5.6M-B2	
D15	8-719-914-43	DIODE DAN202K	
D16	8-719-914-43	DIODE DAN202K	

<FERRITE BEAD>

FB01	1-414-232-11	INDUCTOR, FERRITE BEAD	
FB02	1-414-232-11	INDUCTOR, FERRITE BEAD	

<FILTER>

FL01	1-239-882-11	FILTER, LOW PASS	
FL02	1-236-071-41	ENCAPSULATED COMPONENT	
FL03	1-236-071-41	ENCAPSULATED COMPONENT	
FL04	1-236-071-41	ENCAPSULATED COMPONENT	
FL05	1-236-071-41	ENCAPSULATED COMPONENT	
FL06	1-236-071-41	ENCAPSULATED COMPONENT	
FL08	1-236-071-41	ENCAPSULATED COMPONENT	
FL09	1-239-881-11	FILTER, LOW PASS	
FL10	1-239-881-11	FILTER, LOW PASS	
FL11	1-239-883-11	FILTER, LOW PASS	

<IC>

IC01	8-759-257-59	IC TDA8755T-T	
IC02	8-759-280-76	IC ZA2970-26DTR	
IC03	8-759-280-76	IC ZA2970-26DTR	
IC04	8-759-257-61	IC SAA4940H-T	

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC06	8-759-257-92	IC SAA4951WP/V1-T	
IC07	8-759-297-15	IC P83C652FBA-V3/AB517	
IC08	8-759-708-05	IC NJM78L05A	
IC10	8-759-033-03	IC MC74F08M	
IC11	8-759-708-05	IC NJM78L05A	
IC12	8-759-267-22	IC MC14046BDWR2	
IC13	8-759-238-87	IC TC4S66F(TE85R)	
IC14	8-759-708-05	IC NJM78L05A	
IC15	8-759-238-87	IC TC4S66F(TE85R)	
IC16	8-759-033-03	IC MC74F08M	
IC17	8-759-257-63	IC SAA7158WP-T	
IC18	8-759-708-05	IC NJM78L05A	
IC19	8-759-238-87	IC TC4S66F(TE85R)	
IC20	8-759-238-87	IC TC4S66F(TE85R)	
IC23	8-752-012-52	IC CX20125	
IC24	8-759-710-86	IC NJM2233BM	
IC25	8-759-042-02	IC S-80743AL-A7-S	
		<CONDCTOR CHIP>	
JR15	1-216-295-00	CONDCTOR, CHIP	
JR17	1-216-295-00	CONDCTOR, CHIP	
JR19	1-216-295-00	CONDCTOR, CHIP	
JR20	1-216-295-00	CONDCTOR, CHIP	
JR22	1-216-295-00	CONDCTOR, CHIP	
JR23	1-216-295-00	CONDCTOR, CHIP	
JR24	1-216-295-00	CONDCTOR, CHIP	
JR25	1-216-295-00	CONDCTOR, CHIP	
JR26	1-216-295-00	CONDCTOR, CHIP	
JR30	1-216-295-00	CONDCTOR, CHIP	
JR31	1-216-295-00	CONDCTOR, CHIP	
JR33	1-216-295-00	CONDCTOR, CHIP	
JR35	1-216-295-00	CONDCTOR, CHIP	
JR36	1-216-295-00	CONDCTOR, CHIP	
JR37	1-216-295-00	CONDCTOR, CHIP	
JR39	1-216-295-00	CONDCTOR, CHIP	
JR40	1-216-295-00	CONDCTOR, CHIP	
JR43	1-216-295-00	CONDCTOR, CHIP	
JR44	1-216-295-00	CONDCTOR, CHIP	
JR45	1-216-295-00	CONDCTOR, CHIP	
JR46	1-216-295-00	CONDCTOR, CHIP	
JR47	1-216-295-00	CONDCTOR, CHIP	
JR48	1-216-295-00	CONDCTOR, CHIP	
JR49	1-216-295-00	CONDCTOR, CHIP	
JR50	1-216-295-00	CONDCTOR, CHIP	
JR51	1-216-295-00	CONDCTOR, CHIP	
JR52	1-216-295-00	CONDCTOR, CHIP	
JR53	1-216-295-00	CONDCTOR, CHIP	
JR54	1-216-295-00	CONDCTOR, CHIP	
JR55	1-216-295-00	CONDCTOR, CHIP	
JR56	1-216-295-00	CONDCTOR, CHIP	
JR57	1-216-295-00	CONDCTOR, CHIP	
JR58	1-216-295-00	CONDCTOR, CHIP	
		<COIL>	
L01	1-410-435-21	INDUCTOR 220UH	
L02	1-410-435-21	INDUCTOR 220UH	
L04	1-408-409-00	INDUCTOR 10UH	
L05	1-426-942-11	TRANSFORMER, DETECTOR	
L06	1-426-941-11	TRANSFORMER, DETECTOR	
L07	1-426-803-21	TRANSFORMER, DETECTOR	
L08	1-408-409-00	INDUCTOR 10UH	
L09	1-408-409-00	INDUCTOR 10UH	
L10	1-426-801-21	TRANSFORMER, DETECTOR	
L14	1-408-409-00	INDUCTOR 10UH	
L15	1-408-409-00	INDUCTOR 10UH	
L16	1-408-409-00	INDUCTOR 10UH	
L1001	1-410-989-11	INDUCTOR CHIP 0.47UH	
		<TRANSISTOR>	
Q01	8-729-216-22	TRANSISTOR 2SA1162-G	
Q03	8-729-216-22	TRANSISTOR 2SA1162-G	
Q04	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q05	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q06	8-729-216-22	TRANSISTOR 2SA1162-G	
Q07	8-729-901-01	TRANSISTOR DTC144EK	
Q08	8-729-025-25	TRANSISTOR BF550	
Q09	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q10	8-729-025-25	TRANSISTOR BF550	
Q11	8-729-025-25	TRANSISTOR BF550	
Q12	8-729-216-22	TRANSISTOR 2SA1162-G	
Q13	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q14	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q15	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q16	8-729-216-22	TRANSISTOR 2SA1162-G	
Q17	8-729-901-01	TRANSISTOR DTC144EK	
Q18	8-729-901-01	TRANSISTOR DTC144EK	
Q19	8-729-216-22	TRANSISTOR 2SA1162-G	
Q20	8-729-216-22	TRANSISTOR 2SA1162-G	
Q21	8-729-216-22	TRANSISTOR 2SA1162-G	
Q22	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q23	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q24	8-729-901-01	TRANSISTOR DTC144EK	
Q27	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q28	8-729-216-22	TRANSISTOR 2SA1162-G	
Q29	8-729-901-01	TRANSISTOR DTC144EK	
Q30	8-729-920-74	TRANSISTOR 2SC2412K-QR	
		<RESISTOR>	
R02	1-216-295-00	CONDCTOR, CHIP	
R04	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R05	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R07	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R08	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R09	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R10	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R11	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R12	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R13	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R14	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R15	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R16	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R20	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R21	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R22	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R23	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R24	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R25	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R26	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R27	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R28	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R29	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R30	1-216-295-00	CONDCTOR, CHIP	
R33	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R34	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R35	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R36	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R37	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R38	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R39	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R40	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R41	1-216-295-00	CONDCTOR, CHIP				
R42	1-216-295-00	CONDCTOR, CHIP				
R43	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R44	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R45	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R46	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R47	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R48	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R49	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R54	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R55	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R56	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R57	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R58	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R59	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R60	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R61	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R62	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R65	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R66	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R67	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R68	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R69	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R70	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R71	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R72	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R73	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R74	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R75	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R76	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R77	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R78	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R79	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R80	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R81	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R83	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R84	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R85	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R87	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R89	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R90	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R91	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R92	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R93	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R94	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R95	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R96	1-216-295-00	CONDCTOR, CHIP				
R99	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1001	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1002	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1003	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1004	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1005	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1006	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1007	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1008	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1009	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1010	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1012	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1013	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1014	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1015	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R1016	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R1017	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1018	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R1019	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R1020	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1021	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1022	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1024	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1026	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1027	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1028	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1029	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1030	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1031	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1032	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1033	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1038	1-216-295-00	CONDCTOR, CHIP				
R1039	1-216-295-00	CONDCTOR, CHIP				
R1040	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1041	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1042	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1043	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1044	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1045	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1046	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1047	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1048	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1049	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1050	1-216-295-00	CONDCTOR, CHIP				
R1052	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1053	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1054	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1055	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1056	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1057	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1060	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1061	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1062	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1063	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1064	1-216-295-00	CONDCTOR, CHIP				
R1065	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1066	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1067	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1068	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1069	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1070	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1071	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1072	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1073	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1074	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1075	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1076	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1077	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1078	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1079	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1080	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1081	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1082	1-216-025-00	METAL GLAZE	100	5%	1/10W	

The components identified by shading and mark ⚠ are critical for safety.
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REF.NO.	PART NO.	DESCRIPTION				REMARK
R1083	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1084	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1085	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1086	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1087	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1088	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1089	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1091	1-216-025-00	METAL GLAZE	100	5%	1/10W	
		<CRYSTAL>				
X1	1-578-774-11	VIBRATOR, CRYSTAL				
		**********				
	*A-1297-417-A	A2 BOARD, COMPLETE (KV-W28MN11/MH11)				
		**********				
	*A-1297-419-A	A2 BOARD, COMPLETE (KV-W32MN11/MH11)				
		**********				
		<CAPACITOR>				
C101	1-124-126-00	ELECT	47MF	20%	16V	
C102	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C103	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C104	1-126-967-11	ELECT	47MF	20%	50V	
C105	1-126-967-11	ELECT	47MF	20%	50V	
C106	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C107	1-163-005-11	CERAMIC CHIP	470PF	10%	50V (KV-W32MN11/MH11)	
C108	1-126-233-11	ELECT	22MF	20%	50V (KV-W32MN11/MH11)	
C109	1-126-233-11	ELECT	22MF	20%	50V	
C110	1-124-126-00	ELECT	47MF	20%	16V (KV-W32MN11/MH11)	
C111	1-163-005-11	CERAMIC CHIP	470PF	10%	50V (KV-W32MN11/MH11)	
C112	1-124-903-11	ELECT	1MF	20%	50V	
C113	1-124-126-00	ELECT	47MF	20%	16V (KV-W32MN11/MH11)	
C114	1-163-005-11	CERAMIC CHIP	470PF	10%	50V (KV-W32MN11/MH11)	
C115	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C116	1-124-126-00	ELECT	47MF	20%	16V (KV-W32MN11/MH11)	
C117	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C118	1-124-126-00	ELECT	47MF	20%	16V	
C119	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C120	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	
C121	1-124-126-00	ELECT	47MF	20%	16V (KV-W32MN11/MH11)	
C122	1-163-005-11	CERAMIC CHIP	470PF	10%	50V (KV-W32MN11/MH11)	
C123	1-124-126-00	ELECT	47MF	20%	16V	
C124	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
		<CONNECTOR>				
CN101	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P				
CN102	1-695-915-11	TAB (CONTACT)				
		<DIODE>				
D101	8-719-119-22	DIODE RD33F-T7B1				

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<IF BLOCK>				
IF101	1-466-677-11	IF BLOCK (IFF-380)				
IF102	1-466-138-11	IF BLOCK (IFF-380A)				(KV-W32MN11/MH11)
		<COIL>				
L101	1-408-417-00	INDUCTOR	47UH			
L102	1-408-417-00	INDUCTOR	47UH			
L103	1-408-417-00	INDUCTOR	47UH			(KV-W32MN11/MH11)
L104	1-408-417-00	INDUCTOR	47UH			(KV-W32MN11/MH11)
L105	1-408-417-00	INDUCTOR	47UH			(KV-W32MN11/MH11)
L106	1-408-417-00	INDUCTOR	47UH			
		<TRANSISTOR>				
Q101	8-729-216-22	TRANSISTOR 2SA1162-G				
		<RESISTOR>				
R102	1-216-464-11	METAL OXIDE	18K	5%	2W F	
R103	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R104	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R105	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R106	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R107	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R108	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R109	1-216-033-00	METAL GLAZE	220	5%	1/10W (KV-W32MN11/MH11)	
R110	1-216-033-00	METAL GLAZE	220	5%	1/10W (KV-W32MN11/MH11)	
R111	1-216-073-00	METAL GLAZE	10K	5%	1/10W (KV-W32MN11/MH11)	
R112	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R113	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R114	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R115	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R116	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R117	1-216-081-00	METAL GLAZE	22K	5%	1/10W (KV-W32MN11/MH11)	
		<TUNER>				
TU101	8-598-270-00	TUNER, BT BTP-BG421				
TU102	8-598-270-00	TUNER, BT BTP-BG421				(KV-W32MN11/MH11)
		**********				
	*A-1297-418-A	A BOARD, COMPLETE				
		**********				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C001	1-126-204-11	ELECT	47MF	20%	16V	
C002	1-126-233-11	ELECT	22MF	20%	50V	
C003	1-104-664-11	ELECT	47MF	20%	25V	
C004	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C005	1-124-126-00	ELECT	47MF	20%	16V	
C006	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C007	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C008	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C009	1-163-033-91	CERAMIC CHIP	0.022MF		50V	
C010	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C011	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C012	1-164-346-11	CERAMIC CHIP 1MF		16V	
C029	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V	
C037	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C040	1-163-243-11	CERAMIC CHIP 47PF	5%	50V	
C041	1-163-243-11	CERAMIC CHIP 47PF	5%	50V	
C042	1-164-346-11	CERAMIC CHIP 1MF		16V	
C057	1-124-902-00	ELECT 0.47MF	20%	50V	
C104	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	
C105	1-124-126-00	ELECT 47MF	20%	16V	
C268	1-126-934-11	ELECT 220MF	20%	16V	
C269	1-124-126-00	ELECT 47MF	20%	16V	
C270	1-126-933-11	ELECT 100MF	20%	16V	
C271	1-164-005-11	CERAMIC CHIP 0.47MF		25V	
C301	1-164-346-11	CERAMIC CHIP 1MF		16V	
C302	1-164-346-11	CERAMIC CHIP 1MF		16V	
C303	1-164-346-11	CERAMIC CHIP 1MF		16V	
C304	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C305	1-126-934-11	ELECT 220MF	20%	16V	
C306	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	
C307	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	
C308	1-164-005-11	CERAMIC CHIP 0.47MF		25V	
C310	1-164-346-11	CERAMIC CHIP 1MF		16V	
C311	1-164-346-11	CERAMIC CHIP 1MF		16V	
C312	1-164-346-11	CERAMIC CHIP 1MF		16V	
C313	1-124-927-11	ELECT 4.7MF	20%	50V	
C314	1-124-903-11	ELECT 1MF	20%	50V	
C315	1-164-336-11	CERAMIC CHIP 0.33MF		25V	
C316	1-164-346-11	CERAMIC CHIP 1MF		16V	
C317	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C318	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C319	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C320	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
C321	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
C322	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
C325	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C327	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C328	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C329	1-164-346-11	CERAMIC CHIP 1MF		16V	
C331	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
C336	1-164-346-11	CERAMIC CHIP 1MF		16V	
C337	1-164-346-11	CERAMIC CHIP 1MF		16V	
C338	1-164-346-11	CERAMIC CHIP 1MF		16V	
C339	1-164-346-11	CERAMIC CHIP 1MF		16V	
C601	1-137-479-11	FILM 1MF	10%	400V	
C602	1-124-927-11	ELECT 4.7MF	20%	50V	
C603	1-124-463-00	ELECT 0.1MF	20%	50V	
C604	1-126-233-11	ELECT 22MF	20%	50V	
C605	1-136-481-11	FILM 0.0022MF	2%	50V	
C607	1-127-530-11	ELECT(SOLID) 22MF	20%	20V	
C608	1-126-233-11	ELECT 22MF	20%	50V	
C609	1-136-165-00	FILM 0.1MF	5%	50V	
C610	1-164-625-11	CERAMIC 680PF	10%	500V	
C611	1-164-625-11	CERAMIC 680PF	10%	500V	
C612	1-126-964-11	ELECT 10MF	20%	50V	
C613	1-107-910-11	ELECT 100MF	20%	50V	
C614	1-165-127-11	CERAMIC 470PF	10%	500V	
C615	1-137-219-11	FILM 0.015MF	5%	0	
C616	1-137-219-11	FILM 0.015MF	5%	0	
C617	1-164-346-11	CERAMIC 0.0022MF	20%	400V	
C619	1-104-760-11	CERAMIC CHIP 0.047MF	10%	50V	
C620	1-104-760-11	CERAMIC CHIP 0.047MF	10%	50V	
C624	1-126-964-11	ELECT 10MF	20%	50V	
C652	1-126-953-11	ELECT 2200MF	20%	35V	

REF.NO.	PART NO.	DESCRIPTION			REMARK
C653	1-126-953-11	ELECT 2200MF	20%	35V	
C654	1-162-318-11	CERAMIC 0.001MF	10%	500V	
C655	1-128-548-11	ELECT 4700MF	20%	25V	
C656	1-126-929-11	ELECT 4700MF	20%	10V	
C658	1-124-347-00	ELECT 100MF	20%	160V	
C659	1-126-967-11	ELECT 47MF	20%	50V	
C660	1-126-233-11	ELECT 22MF	20%	50V	
C661	1-102-030-00	CERAMIC 330PF	10%	500V	
C662	1-106-347-00	MYLAR 0.0015MF	10%	100V	
C663	1-104-666-11	ELECT 220MF	20%	25V	
C664	1-124-916-11	ELECT 22MF	20%	25V	
C665	1-124-903-11	ELECT 1MF	20%	50V	
C667	1-164-645-11	CERAMIC 1000PF	10%	500V	
C668	1-164-645-11	CERAMIC 1000PF	10%	500V	
C669	1-164-645-11	CERAMIC 1000PF	10%	500V	
C670	1-164-645-11	CERAMIC 1000PF	10%	500V	
C1200	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	
C1201	1-163-229-11	CERAMIC CHIP 12PF	5%	50V	
C1202	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
C1203	1-163-031-11	CERAMIC CHIP 0.01MF		50V	
C1204	1-124-126-00	ELECT 47MF	20%	16V	
C1205	1-164-222-11	CERAMIC CHIP 0.22MF		25V	
C1206	1-164-005-11	CERAMIC CHIP 0.47MF		25V	
C1207	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1208	1-126-964-11	ELECT 10MF	20%	50V	
C1209	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	
C1210	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	
C1211	1-126-111-11	ELECT 3.3MF	20%	50V	
C1212	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1213	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1214	1-126-233-11	ELECT 22MF	20%	50V	
C1215	1-126-964-11	ELECT 10MF	20%	50V	
C1219	1-163-131-00	CERAMIC CHIP 390PF	5%	50V	
C1220	1-163-131-00	CERAMIC CHIP 390PF	5%	50V	
C1221	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C1222	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C1225	1-126-233-11	ELECT 22MF	20%	50V	
C1226	1-124-126-00	ELECT 47MF	20%	16V	
C1227	1-126-933-11	ELECT 100MF	20%	16V	
C1228	1-164-222-11	CERAMIC CHIP 0.22MF		25V	
C1229	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1230	1-163-137-00	CERAMIC CHIP 680PF	5%	50V	
C1231	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1232	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1233	1-163-031-11	CERAMIC CHIP 0.01MF		50V	
C1234	1-164-005-11	CERAMIC CHIP 0.47MF		25V	
C1235	1-164-005-11	CERAMIC CHIP 0.47MF		25V	
C1238	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C1239	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C1240	1-164-005-11	CERAMIC CHIP 0.47MF		25V	
C1241	1-164-005-11	CERAMIC CHIP 0.47MF		25V	
C1243	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1247	1-126-233-11	ELECT 22MF	20%	50V	
C1252	1-163-031-11	CERAMIC CHIP 0.01MF		50V	
C1254	1-163-033-91	CERAMIC CHIP 0.022MF		50V	
C1255	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
C2001	1-124-126-00	ELECT 47MF	20%	16V	
C2003	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C2004	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C2005	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C2009	1-164-346-11	CERAMIC CHIP 1MF		16V	
C2010	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C2011	1-163-038-91	CERAMIC CHIP 0.1MF		25V	

REF.NO.	PART NO.	DESCRIPTION			REMARK
C2012	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C2014	1-126-964-11	ELECT	10MF	20%	50V
C2015	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C2016	1-126-964-11	ELECT	10MF	20%	50V
C2017	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C2018	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C2601	1-104-664-11	ELECT	47MF	20%	25V
C2602	1-104-664-11	ELECT	47MF	20%	25V
C2603	1-104-664-11	ELECT	47MF	20%	25V
C2604	1-104-664-11	ELECT	47MF	20%	25V
C2605	1-104-664-11	ELECT	47MF	20%	25V
		<CONNECTOR>			
CN101	*1-564-512-11	PLUG, CONNECTOR 9P			
CN102	*1-764-177-11	PIN, CONNECTOR (SMD)(1.5MM) 7P			
CN107	*1-564-509-11	PLUG, CONNECTOR 6P			
CN118	1-764-608-11	CONNECTOR, BOARD TO BOARD 8P			
CN119	1-764-608-11	CONNECTOR, BOARD TO BOARD 8P			
CN120	1-764-608-11	CONNECTOR, BOARD TO BOARD 8P			
CN121	1-764-608-11	CONNECTOR, BOARD TO BOARD 8P			
CN123	*1-564-511-11	PLUG, CONNECTOR 8P			
CN128	*1-564-506-11	PLUG, CONNECTOR 3P			
CN131	1-764-608-11	CONNECTOR, BOARD TO BOARD 8P			
CN132	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P			
CN133	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P			
CN134	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P			
CN135	*1-564-508-11	PLUG, CONNECTOR 5P			
CN136	*1-564-509-11	PLUG, CONNECTOR 6P			
CN137	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P			
CN601	1-766-964-11	PIN, CONNECTOR (PC BOARD) 6P			
		<DIODE>			
D011	8-719-914-43	DIODE DAN202K			
D201	8-719-404-46	DIODE MA110			
D202	8-719-914-42	DIODE DA204K			
D203	8-719-404-46	DIODE MA110			
D204	8-719-404-46	DIODE MA110			
D301	8-719-914-43	DIODE DAN202K			
D302	8-719-914-43	DIODE DAN202K			
D303	8-719-914-43	DIODE DAN202K			
D304	8-719-914-43	DIODE DAN202K			
D306	8-719-914-43	DIODE DAN202K			
D307	8-719-404-46	DIODE MA110			
D308	8-719-404-46	DIODE MA110			
D309	8-719-404-46	DIODE MA110			
D310	8-719-404-46	DIODE MA110			
D311	8-719-404-46	DIODE MA110			
D312	8-719-404-46	DIODE MA110			
D601	8-719-979-58	DIODE EGP10D			
D602	8-719-402-72	DIODE MA3180M-TX			
D603	8-719-979-58	DIODE EGP10D			
D604	8-719-402-72	DIODE MA3180M-TX			
D605	8-719-402-72	DIODE MA3180M-TX			
D606	8-719-402-72	DIODE MA3180M-TX			
D607	8-719-404-46	DIODE MA110			
D608	8-719-404-46	DIODE MA110			
D609	8-719-118-15	DIODE RD36M-B			
D610	8-719-510-48	DIODE D1N20R			
D611	8-719-510-48	DIODE D1N20R			
D612	8-719-404-46	DIODE MA110			
D613	8-719-979-58	DIODE EGP10D			
D614	8-719-106-89	DIODE RD15M-B2			
D615	8-719-404-46	DIODE MA110			
D616	8-719-404-46	DIODE MA110			
D651	8-719-047-31	DIODE RBA-402L			
D652	8-719-312-47	DIODE RBA-404B			
D654	8-719-047-31	DIODE RBA-402L			
D655	8-719-510-48	DIODE D1N20R			
D656	8-719-404-46	DIODE MA110			
D657	8-719-404-46	DIODE MA110			
		<FERRITE BEAD>			
FB001	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB002	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB003	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB004	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB005	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB006	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB007	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB008	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH			
FB603	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH			
FB604	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH			
FB605	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH			
FB608	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH			
FB651	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH			
FB652	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH			
FB653	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH			
FB655	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH			
FB1200	1-414-235-11	INDUCTOR, FERRITE BEAD			
FB1201	1-414-234-11	INDUCTOR, FERRITE BEAD			
		<FILTER>			
FL1201	1-239-803-41	ENCAPSULATED COMPONENT			
		<IC>			
IC001	8-759-708-05	IC NJM78L05A			
IC002	8-759-165-37	IC X24164SIC7000			
IC003	8-752-857-45	IC CXP85340A-SV4918			
IC004	8-759-042-02	IC S-80743AL-A7-S			
IC301	8-759-300-71	IC HD14053BFP			
IC302	8-759-257-62	IC TDA4686			
IC303	8-759-909-71	IC BA4558F			
IC601	8-759-297-44	IC MC33025P			
IC602	8-759-185-47	IC IR2112			
IC650	1-810-477-11	POWER MODULE (DM-48)			
IC651	8-749-010-65	PHOTO COUPLER PC123FY2			
IC652	8-759-420-19	IC AN1431T			
IC1201	8-759-285-19	IC MSP3410TE-L			
IC1202	8-759-708-08	IC NJM78L08A			
IC2001	8-759-285-20	IC TPU3040TE-L			
	1-251-256-11	SOCKET, IC; IC2001			
IC2002	8-759-288-09	IC MB81C1000A-80PSZ			
IC2601	8-759-518-68	IC PQ12RF21			
IC2602	8-759-701-59	IC NJM78M09FA			
IC2603	8-749-010-55	IC PQ05RH1			
		<CONDCTOR CHIP>			
JR1202	1-216-295-00	CONDCTOR, CHIP			
JR1203	1-216-295-00	CONDCTOR, CHIP			

A

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<COIL>	
L002	1-408-609-41	INDUCTOR 33UH	
L003	1-408-404-00	INDUCTOR 3.9UH	
L101	1-408-417-00	INDUCTOR 47UH	
L651	1-412-525-21	INDUCTOR 10UH	
L652	1-412-525-21	INDUCTOR 10UH	
L653	1-412-525-21	INDUCTOR 10UH	
L654	1-412-525-21	INDUCTOR 10UH	
L655	1-412-525-21	INDUCTOR 10UH	
L1202	1-408-417-00	INDUCTOR 47UH	
L1203	1-408-408-00	INDUCTOR 8.2UH	
L1204	1-408-397-00	INDUCTOR 1UH	
L1205	1-408-408-00	INDUCTOR 8.2UH	
L2001	1-408-609-41	INDUCTOR 33UH	
		<IC LINK>	
PS651	1-532-686-21	LINK, IC	
		<TRANSISTOR>	
Q101	8-729-901-01	TRANSISTOR DTC144EK	
Q203	8-729-216-22	TRANSISTOR 2SA1162-G	
Q204	8-729-216-22	TRANSISTOR 2SA1162-G	
Q301	8-729-216-22	TRANSISTOR 2SA1162-G	
Q302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q303	8-729-216-22	TRANSISTOR 2SA1162-G	
Q304	8-729-900-53	TRANSISTOR DTC114EK	
Q305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q306	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q307	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q308	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q309	8-729-216-22	TRANSISTOR 2SA1162-G	
Q310	8-729-900-53	TRANSISTOR DTC114EK	
Q311	8-729-900-53	TRANSISTOR DTC114EK	
Q312	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q313	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q314	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q315	8-729-900-53	TRANSISTOR DTC114EK	
Q316	8-729-900-53	TRANSISTOR DTC114EK	
Q317	8-729-900-53	TRANSISTOR DTC114EK	
Q318	8-729-900-53	TRANSISTOR DTC114EK	
Q319	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q320	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q321	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q322	8-729-216-22	TRANSISTOR 2SA1162-G	
Q601	8-729-216-22	TRANSISTOR 2SA1162-G	
Q602	8-729-216-22	TRANSISTOR 2SA1162-G	
Q603	8-729-216-22	TRANSISTOR 2SA1162-G	
Q604	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q605	8-729-028-10	TRANSISTOR IRFI744G-LF	
Q606	8-729-028-10	TRANSISTOR IRFI744G-LF	
Q607	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q608	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q611	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q612	8-729-209-15	TRANSISTOR 2SD2012	
Q651	8-729-216-22	TRANSISTOR 2SA1162-G	
Q652	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q653	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1201	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1202	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1203	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1204	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1205	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1206	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1207	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1208	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1209	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1210	8-729-901-01	TRANSISTOR DTC144EK	
Q2006	8-729-216-22	TRANSISTOR 2SA1162-G	
		<RESISTOR>	
R001	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R002	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R003	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R004	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R005	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R006	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R007	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R008	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R009	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R010	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R011	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R012	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R013	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R014	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R015	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R016	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R017	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R018	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R019	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R020	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R021	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R022	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R023	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R024	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R025	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R026	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R027	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R028	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R029	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R030	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R031	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R032	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R033	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R034	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R035	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R036	1-216-295-00	CONDCTOR, CHIP	
R037	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R038	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R039	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R040	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R041	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R042	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R043	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R044	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R045	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R046	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R047	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R048	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R049	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R050	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R051	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R052	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R053	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R055	1-216-049-00	METAL GLAZE 1K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R056	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R057	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R058	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R059	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R060	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R061	1-218-756-11	METAL CHIP	150K	0.50%	1/10W	
R062	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R063	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R064	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R066	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R071	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R072	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R102	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R251	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R252	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R253	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R254	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R301	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R302	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R303	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R304	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R305	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R306	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R307	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R308	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R309	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R310	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R311	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R312	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R313	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R315	1-216-295-00	CONDCTOR, CHIP				
R316	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R317	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R318	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R320	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R321	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R322	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R323	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R324	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R325	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R326	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R327	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R328	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R329	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R330	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R331	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R332	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R333	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R334	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R335	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R336	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R337	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R338	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R339	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R340	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R343	1-216-295-00	CONDCTOR, CHIP				
R344	1-216-295-00	CONDCTOR, CHIP				
R345	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R346	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R347	1-216-015-00	METAL GLAZE	39	5%	1/10W	
R348	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R349	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R350	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R351	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R352	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R353	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R354	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R355	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R356	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R357	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R358	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R359	1-218-753-11	METAL CHIP	110K	0.50%	1/10W	
R360	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R361	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R362	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R601	1-247-903-00	CARBON	1M	5%	1/4W	
R602	1-247-903-00	CARBON	1M	5%	1/4W	
R603	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R604	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R605	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R606	1-249-426-11	CARBON	5.6K	5%	1/4W	
R607	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R608	1-216-664-11	METAL CHIP	3.6K	0.50%	1/10W	
R609	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R610	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R611	1-216-660-11	METAL CHIP	2.4K	0.50%	1/10W	
R612	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R613	1-249-420-11	CARBON	1.8K	5%	1/4W	
R614	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R615	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R616	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R618	1-216-198-91	METAL GLAZE	1K	5%	1/8W	
R619	1-249-393-11	CARBON	10	5%	1/4W	
R620	1-249-393-11	CARBON	10	5%	1/4W	
R621	1-249-397-11	CARBON	22	5%	1/4W	F
R622	1-249-441-11	CARBON	100K	5%	1/4W	
R623	1-249-397-11	CARBON	22	5%	1/4W	F
R624	1-249-441-11	CARBON	100K	5%	1/4W	
R626	1-219-440-11	RES, METAL PLATE 0.47				
R627	1-215-882-00	METAL OXIDE	22	5%	2W	F
R628	1-216-186-00	METAL GLAZE	330	5%	1/8W	
R629	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R630	1-215-882-00	METAL OXIDE	22	5%	2W	F
R631	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R632	1-216-186-00	METAL GLAZE	330	5%	1/8W	
R633	1-216-352-11	METAL OXIDE	1.8	5%	1W	F
R634	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R635	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R636	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R651	1-249-377-11	CARBON	0.47	5%	1/4W	F
R652	1-249-417-11	CARBON	1K	5%	1/4W	
R653	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R654	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R655	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R656	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R657	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R658	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R659	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R660	1-249-437-11	CARBON	47K	5%	1/4W	
R661	1-249-405-11	CARBON	100	5%	1/4W	F
R662	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R663	1-208-801-11	METAL CHIP	6.2K	0.50%	1/10W	
R664	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R665	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R666	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R667	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R669	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

A C

REF.NO.	PART NO.	DESCRIPTION				REMARK
R670	1-249-377-11	CARBON	0.47	5%	1/4W	F
R671	1-249-377-11	CARBON	0.47	5%	1/4W	F
R672	1-249-377-11	CARBON	0.47	5%	1/4W	F
R673	1-249-377-11	CARBON	0.47	5%	1/4W	F
R674	1-249-377-11	CARBON	0.47	5%	1/4W	F
R1200	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1201	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1202	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1204	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1205	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1206	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1207	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1208	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1209	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1210	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1211	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R1212	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1213	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1214	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R1215	1-216-295-00	CONDCTOR, CHIP				
R1216	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1218	1-216-295-00	CONDCTOR, CHIP				
R1219	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1221	1-216-295-00	CONDCTOR, CHIP				
R1222	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1224	1-216-295-00	CONDCTOR, CHIP				
R1225	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1226	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1227	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1228	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1229	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1230	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R2002	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R2003	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2004	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2005	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2006	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2007	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2008	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2009	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2017	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2018	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2019	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2020	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2021	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2025	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R2026	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R2027	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R2601	1-216-097-00	METAL GLAZE	100K	5%	1/10W	

<TRANSFORMER>

T650	⚠ 1-426-970-11	TRANSFORMER, CONVERTER (PIT)	

<CRYSTAL>

X001	1-760-180-11	VIBRATOR, CRYSTAL	
X1200	1-760-535-21	VIBRATOR, CRYSTAL	
X2001	1-760-509-21	VIBRATOR, CRYSTAL	

****

*A-1331-389-A C BOARD, COMPLETE (KV-W32MN11/MH11)
****

REF.NO.	PART NO.	DESCRIPTION			REMARK
*A-1331-391-A		C BOARD, COMPLETE (KV-W28MN11/MH11)			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			

<CAPACITOR>

C701	1-162-114-00	CERAMIC	0.0047MF		2KV
C703	1-107-651-11	ELECT	4.7MF	20%	250V
C704	1-130-202-91	FILM	0.022MF	5%	400V
C711	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C712	1-102-820-00	CERAMIC	330PF	5%	50V
C713	1-102-824-00	CERAMIC	470PF	5%	50V
C714	1-102-820-00	CERAMIC	330PF	5%	50V
C716	1-126-933-11	ELECT	100MF	20%	16V

<CONNECTOR>

CN701	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P
CN703	*1-564-511-11	PLUG, CONNECTOR 8P
CN704	1-695-915-11	TAB (CONTACT)

<DIODE>

D701	8-719-911-19	DIODE 1SS119
D702	8-719-911-19	DIODE 1SS119
D703	8-719-911-19	DIODE 1SS119
D704	8-719-911-19	DIODE 1SS119
D705	8-719-911-19	DIODE 1SS119
D706	8-719-911-19	DIODE 1SS119
D707	8-719-911-19	DIODE 1SS119
D708	8-719-911-19	DIODE 1SS119
D709	8-719-911-19	DIODE 1SS119
D710	8-719-911-19	DIODE 1SS119
D711	8-719-911-19	DIODE 1SS119
D712	8-719-911-19	DIODE 1SS119
D714	8-719-110-03	DIODE RD7.5ESB2

<SOCKET>

J701	⚠ 1-540-223-11	SOCKET, PICTURE TUBE	

<COIL>

L701	1-410-667-31	INDUCTOR	22UH
L703	1-408-412-00	INDUCTOR	18UH
L705	1-408-412-00	INDUCTOR	18UH
L707	1-408-412-00	INDUCTOR	18UH

<TRANSISTOR>

Q701	8-729-326-11	TRANSISTOR 2SC2611
Q702	8-729-326-11	TRANSISTOR 2SC2611
Q703	8-729-326-11	TRANSISTOR 2SC2611
Q704	8-729-326-11	TRANSISTOR 2SC2611
Q705	8-729-326-11	TRANSISTOR 2SC2611
Q706	8-729-326-11	TRANSISTOR 2SC2611
Q707	8-729-200-17	TRANSISTOR 2SA1091-O
Q708	8-729-200-17	TRANSISTOR 2SA1091-O
Q709	8-729-200-17	TRANSISTOR 2SA1091-O
Q710	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q711	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q712	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q714	8-729-255-12	TRANSISTOR 2SC2551-O

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R701	1-202-883-11	SOLID	680K	20%	1/2W	
R702	1-202-838-00	SOLID	100K	20%	1/2W	
R703	1-202-813-00	SOLID	22K	20%	1/2W	
R705	1-216-367-11	METAL OXIDE	0.68	5%	2W	F
R707	1-249-420-11	CARBON	1.8K	5%	1/4W	
R708	1-249-420-11	CARBON	1.8K	5%	1/4W	
R709	1-249-420-11	CARBON	1.8K	5%	1/4W	
R710	1-215-922-11	METAL OXIDE	6.8K	5%	3W	F
R711	1-202-549-00	SOLID	100	20%	1/2W	
R712	1-215-922-11	METAL OXIDE	6.8K	5%	3W	F
R713	1-202-549-00	SOLID	100	20%	1/2W	
R714	1-215-922-11	METAL OXIDE	6.8K	5%	3W	F
R715	1-202-549-00	SOLID	100	20%	1/2W	
R716	1-249-405-11	CARBON	100	5%	1/4W	F
R717	1-249-405-11	CARBON	100	5%	1/4W	F
R718	1-249-405-11	CARBON	100	5%	1/4W	F
R720	1-249-417-11	CARBON	1K	5%	1/4W	F
R722	1-249-417-11	CARBON	1K	5%	1/4W	F
R724	1-249-417-11	CARBON	1K	5%	1/4W	F
R725	1-249-423-11	CARBON	3.3K	5%	1/4W	
R726	1-249-423-11	CARBON	3.3K	5%	1/4W	
R727	1-249-421-11	CARBON	2.2K	5%	1/4W	
R728	1-249-408-11	CARBON	180	5%	1/4W	
R729	1-249-408-11	CARBON	180	5%	1/4W	
R730	1-249-408-11	CARBON	180	5%	1/4W	
R731	1-249-397-11	CARBON	22	5%	1/4W	
R732	1-249-397-11	CARBON	22	5%	1/4W	
R733	1-249-397-11	CARBON	22	5%	1/4W	
R734	⚠ 1-202-549-81	SOLID	100	20%	1/2W	
R738	1-247-807-31	CARBON	100	5%	1/4W	
R739	1-247-807-31	CARBON	100	5%	1/4W	
R740	1-247-807-31	CARBON	100	5%	1/4W	
R743	1-249-440-11	CARBON	82K	5%	1/4W	
R747	1-216-489-11	METAL OXIDE	27K	5%	3W	F
R749	1-216-490-11	METAL OXIDE	39K	5%	3W	F
R751	1-215-926-00	METAL OXIDE	33K	5%	3W	F
R753	1-249-429-11	CARBON	10K	5%	1/4W	
R763	1-247-887-00	CARBON	220K	5%	1/4W	
R765	1-249-441-11	CARBON	100K	5%	1/4W	
R766	1-249-441-11	CARBON	100K	5%	1/4W	
		<VARIABLE RESISTOR>				
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M				
RV702	⚠ 1-241-714-21	RES, ADJ, METAL FILM 110M				
RV704	1-237-524-21	RES, ADJ, CARBON 1M				
RV705	1-228-999-00	RES, ADJ, CARBON 470K				
		**********				
	*A-1341-842-A	D1 BOARD, COMPLETE (KV-W28MN11/MH11)				
		**********				
	*A-1341-850-A	D1 BOARD, COMPLETE (KV-W32MN11/MH11)				
		**********				
		<CAPACITOR>				
C2807	1-136-157-00	FILM	0.022MF	5%	50V	
C2808	1-136-157-00	FILM	0.022MF	5%	50V	
C2813	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C2814	1-124-126-00	ELECT	47MF	20%	16V	
C2815	1-130-471-00	MYLAR	0.001MF	5%	50V	
C2816	1-136-161-00	FILM	0.047MF	5%	50V	
C2817	1-136-161-00	FILM	0.047MF	5%	50V	
C2818	1-129-765-00	FILM	0.047MF	10%	200V	
C2819	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C2820	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C2821	1-136-157-00	FILM	0.022MF	5%	50V	
C2822	1-136-177-00	FILM	1MF	5%	50V	
C2823	1-126-935-11	ELECT	470MF	20%	16V	
C2824	1-124-126-00	ELECT	47MF	20%	16V	(KV-W28MN11/MH11)
C2825	1-124-126-00	ELECT	47MF	20%	16V	(KV-W28MN11/MH11)
C2826	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	(KV-W28MN11/MH11)
C2827	1-163-020-00	CERAMIC CHIP	0.0082MF	10%	50V	
C2901	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C2902	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C2903	1-129-763-91	FILM	0.033MF	10%	200V	
C2907	1-130-471-00	FILM	0.001MF	5%	50V	
C2908	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C2916	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C2918	1-102-110-00	CERAMIC	220PF	10%	50V	
C2922	1-129-704-91	FILM	0.0015MF	10%	630V	
C2924	1-136-161-00	FILM	0.047MF	5%	50V	
C4800	1-126-952-11	ELECT	1000MF	20%	16V	
C4906	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C5801	1-126-964-11	ELECT	10MF	20%	50V	
		<CONNECTOR>				
CN2800	1-764-811-11	CONNECTOR, BOARD TO BOARD 10P				
CN2801	*1-560-436-00	HORIZONTAL PIN ASSY 3P				
CN2900	1-764-811-11	CONNECTOR, BOARD TO BOARD 10P				
CN2901	1-564-524-11	PLUG, CONNECTOR 9P				
CN5801	*1-564-518-11	PLUG, CONNECTOR 3P				
		<DIODE>				
D2802	8-719-911-19	DIODE 1SS119				
D2803	8-719-911-19	DIODE 1SS119				
D2804	8-719-510-64	DIODE S2LA20F				
D2805	8-719-911-19	DIODE 1SS119				
D2806	8-719-911-19	DIODE 1SS119				
D2807	8-719-911-19	DIODE 1SS119				
D2808	8-719-911-19	DIODE 1SS119				
D2809	8-719-911-19	DIODE 1SS119				
D2902	8-719-911-19	DIODE 1SS119				
D2903	8-719-911-19	DIODE 1SS119				
D2904	8-719-911-19	DIODE 1SS119				
D2905	8-719-979-85	DIODE EGP20G				
D5801	8-719-911-19	DIODE 1SS119				
D5802	8-719-911-19	DIODE 1SS119				
		<IC>				
IC2802	8-752-052-88	IC CXA1526P				
IC2803	8-759-912-77	IC LM324N				
IC2804	8-759-135-80	IC UPC358C				(KV-W28MN11/MH11)
IC2805	8-759-325-48	IC CA0005AD				
IC2901	8-759-729-03	IC NJM2903D				(KV-W28MN11/MH11)
IC2903	8-759-729-03	IC NJM2903D				
IC5801	8-759-603-37	IC M5216P				
		<CONDCTOR CHIP>				

D1

REF.NO.	PART NO.	DESCRIPTION	REMARK
JR2904	1-216-295-00	CONDCTOR, CHIP	
JR2905	1-216-295-00	CONDCTOR, CHIP	
JR4902	1-216-295-00	CONDCTOR, CHIP	
JR4903	1-216-295-00	CONDCTOR, CHIP	
JR5801	1-216-295-00	CONDCTOR, CHIP	
		<COIL>	
L2801	1-406-664-21	COIL, CHOKE 68UH	
L2802	1-406-989-21	COIL, CHOKE 10MMH	
L2907	1-406-674-11	COIL, CHOKE 3.3MMH	
		<TRANSISTOR>	
Q2802	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q2804	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q2805	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2806	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q2807	8-729-140-96	TRANSISTOR 2SD774-34	
Q2808	8-729-140-97	TRANSISTOR 2SB734-34	
Q2809	8-729-140-96	TRANSISTOR 2SD774-34	
Q2810	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2811	8-729-140-97	TRANSISTOR 2SB734-34	
Q2812	8-729-015-02	TRANSISTOR 2SK940	
Q2813	8-729-216-22	TRANSISTOR 2SA1162-G	(KV-W28MN11/MH11)
Q2814	8-729-230-49	TRANSISTOR 2SC2712-YG	(KV-W28MN11/MH11)
Q2901	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2906	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q2907	8-729-931-45	TRANSISTOR IRF614	
Q4904	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q5801	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q5802	8-729-230-49	TRANSISTOR 2SC2712-YG	
		<RESISTOR>	
R2801	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R2802	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R2803	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2804	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R2806	1-216-134-00	METAL GLAZE 2.2 5% 1/8W	
R2807	1-216-134-00	METAL GLAZE 2.2 5% 1/8W	
R2808	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R2823	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R2824	1-208-824-11	METAL CHIP 56K 0.50% 1/10W	
R2825	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R2831	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2832	1-208-817-11	METAL CHIP 30K 0.50% 1/10W	
R2833	1-216-691-11	METAL CHIP 47K 0.50% 1/10W	
R2834	1-216-295-00	CONDCTOR, CHIP	
R2835	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R2836	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2837	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2838	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R2839	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R2840	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2841	1-216-081-00	METAL GLAZE 22K 5% 1/10W	(KV-W28MN11/MH11)
R2841	1-216-089-00	METAL GLAZE 47K 5% 1/10W	(KV-W32MN11/MH11)
R2842	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R2843	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R2844	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R2845	1-216-089-00	METAL GLAZE 47K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R2846	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2848	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R2850	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R2851	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2852	1-216-085-00	METAL GLAZE 33K 5% 1/10W	(KV-W28MN11/MH11)
R2852	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-W32MN11/MH11)
R2853	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R2854	1-249-393-11	CARBON 10 5% 1/4W F	
R2855	1-215-883-11	METAL OXIDE 33 5% 2W F	
R2856	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R2857	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R2858	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R2859	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2860	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2861	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R2862	1-214-657-11	METAL 1 1% 1/4W	
R2863	1-216-452-11	METAL OXIDE 180 5% 2W F	
R2864	1-216-452-11	METAL OXIDE 180 5% 2W F	
R2865	1-215-860-11	METAL OXIDE 33 5% 1W F	
R2866	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R2867	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R2868	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2870	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R2871	1-216-689-11	METAL GLAZE 39K 5% 1/10W	(KV-W28MN11/MH11)
R2872	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-W28MN11/MH11)
R2873	1-216-635-11	METAL CHIP 220 0.50% 1/10W	(KV-W28MN11/MH11)
R2874	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	(KV-W28MN11/MH11)
R2875	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	(KV-W28MN11/MH11)
R2876	1-216-647-11	METAL CHIP 680 0.50% 1/10W	(KV-W28MN11/MH11)
R2877	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	(KV-W28MN11/MH11)
R2878	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	(KV-W28MN11/MH11)
R2879	1-260-095-11	CARBON 470 5% 1/2W	(KV-W28MN11/MH11)
R2880	1-260-095-11	CARBON 470 5% 1/2W	(KV-W28MN11/MH11)
R2881	1-216-689-11	METAL GLAZE 39K 5% 1/10W	(KV-W28MN11/MH11)
R2882	1-216-081-00	METAL GLAZE 22K 5% 1/10W	(KV-W28MN11/MH11)
R2883	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R2901	1-216-295-00	CONDCTOR, CHIP	
R2902	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R2903	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R2904	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2905	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R2914	1-218-768-11	METAL CHIP 470K 0.50% 1/10W	
R2915	1-218-768-11	METAL CHIP 470K 0.50% 1/10W	
R2916	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R2917	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R2918	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2919	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W	
R2933	1-216-682-11	METAL CHIP 20K 0.50% 1/10W	(KV-W28MN11/MH11)

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2933	1-208-811-11	METAL CHIP	16K	0.50%	1/10W (KV-W32MN11/MH11)	
R2934	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R2935	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2936	1-220-262-11	METAL GLAZE	680	5%	1/4W	
R2937	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R4815	1-215-908-00	METAL OXIDE	33	5%	3W (KV-W28MN11/MH11)	F
R4815	1-216-446-00	METAL OXIDE	18	5%	2W (KV-W32MN11/MH11)	F
R4911	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R4912	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R4913	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R4920	1-216-198-91	METAL GLAZE	1K	5%	1/8W	
R5801	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R5802	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R5803	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R5804	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R5805	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R5806	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R5807	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R5808	1-216-081-00	METAL GLAZE	22K	5%	1/10W	

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*A-1342-258-A VM BOARD, COMPLETE
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4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

C1701	1-126-940-11	ELECT	330MF	20%	16V
C1704	1-161-830-00	CERAMIC	0.0047MF		500V
C1705	1-126-934-11	ELECT	220MF	20%	16V
C1706	1-107-638-11	ELECT	33MF	20%	160V
C1707	1-126-964-11	ELECT	10MF	20%	50V
C1708	1-101-006-00	CERAMIC	0.047MF		50V
C1709	1-129-702-00	FILM	0.001MF	10%	630V
C1710	1-106-367-00	MYLAR	0.01MF	10%	200V
C1711	1-162-318-11	CERAMIC	0.001MF	10%	500V
C1712	1-107-667-11	ELECT	2.2MF	20%	400V
C1713	1-162-318-11	CERAMIC	0.001MF	10%	500V
C1714	1-106-367-00	MYLAR	0.01MF	10%	200V
C1715	1-102-973-00	CERAMIC	100PF	5%	50V
C1716	1-126-964-11	ELECT	10MF	20%	50V
C1718	1-126-934-11	ELECT	220MF	20%	16V
C1719	1-106-222-00	MYLAR	0.12MF	10%	100V

<CONNECTOR>

CN1701*1-564-512-11 PLUG, CONNECTOR 9P

<DIODE>

D1701	8-719-911-19	DIODE 1SS119
D1702	8-719-911-19	DIODE 1SS119
D1703	8-719-911-19	DIODE 1SS119
D1704	8-719-110-88	DIODE RD39ES-T1B
D1705	8-719-110-88	DIODE RD39ES-T1B

<COIL>

L1702 1-408-409-00 INDUCTOR 10UH

REF.NO.	PART NO.	DESCRIPTION				REMARK

<TRANSISTOR>

Q1701	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q1702	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q1703	8-729-017-05	TRANSISTOR	2SA1837
Q1704	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q1705	8-729-017-06	TRANSISTOR	2SC4793
Q1706	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q1707	8-729-142-86	TRANSISTOR	2SC3733
Q1708	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q1709	8-729-255-12	TRANSISTOR	2SC2551-O

<RESISTOR>

R1701	1-247-807-31	CARBON	100	5%	1/4W	
R1702	1-249-416-11	CARBON	820	5%	1/4W	
R1703	1-247-807-31	CARBON	100	5%	1/4W	
R1704	1-249-418-11	CARBON	1.2K	5%	1/4W	
R1705	1-260-313-51	CARBON	56	5%	1/2W	
R1706	1-249-417-11	CARBON	1K	5%	1/4W	F
R1707	1-249-411-11	CARBON	330	5%	1/4W	
R1709	1-249-413-11	CARBON	470	5%	1/4W	
R1710	1-249-385-11	CARBON	2.2	5%	1/4W	F
R1711	1-249-435-11	CARBON	33K	5%	1/4W	
R1712	1-249-436-11	CARBON	39K	5%	1/4W	
R1713	1-249-436-11	CARBON	39K	5%	1/4W	
R1714	1-249-429-11	CARBON	10K	5%	1/4W	
R1715	1-215-912-11	METAL OXIDE	150	5%	3W	F
R1716	1-249-417-11	CARBON	1K	5%	1/4W	F
R1717	1-249-435-11	CARBON	33K	5%	1/4W	
R1718	1-249-412-11	CARBON	390	5%	1/4W	
R1719	1-249-417-11	CARBON	1K	5%	1/4W	
R1720	1-249-417-11	CARBON	1K	5%	1/4W	
R1721	1-249-417-11	CARBON	1K	5%	1/4W	
R1722	1-249-385-11	CARBON	2.2	5%	1/4W	F
R1723	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1724	1-249-436-11	CARBON	39K	5%	1/4W	
R1725	1-249-417-11	CARBON	1K	5%	1/4W	
R1726	1-249-410-11	CARBON	270	5%	1/4W	
R1727	1-249-402-11	CARBON	56	5%	1/4W	F
R1728	1-249-438-11	CARBON	56K	5%	1/4W	
R1729	1-216-451-11	METAL OXIDE	120	5%	2W	F
R1731	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1732	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1735	1-249-426-11	CARBON	5.6K	5%	1/4W	

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*A-1346-262-A D BOARD, COMPLETE (KV-W28MN11/MH11)
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*A-1346-266-A D BOARD, COMPLETE (KV-W32MN11/MH11)
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4-037-121-01 SPACER, MICA
4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

C501	1-124-903-11	ELECT	1MF	20%	50V
C502	1-124-903-11	ELECT	1MF	20%	50V
C503	1-123-024-21	ELECT	33MF		160V
C504	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C506	1-104-665-11	ELECT	100MF	20%	25V
C508	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

D

REF.NO.	PART NO.	DESCRIPTION			REMARK
C509	1-124-927-11	ELECT	4.7MF	20%	50V
C510	1-126-233-11	ELECT	22MF	20%	50V
C511	1-124-126-00	ELECT	47MF	20%	16V
C512	1-106-379-12	MYLAR	0.033MF	10%	200V
C515	1-124-927-11	ELECT	4.7MF	20%	50V
C516	1-124-927-11	ELECT	4.7MF	20%	50V
C518	1-124-905-11	ELECT	1MF	20%	50V
C519	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C523	1-106-353-00	MYLAR	0.0027MF	10%	100V
C524	1-124-903-11	ELECT	1MF	20%	50V
C525	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C526	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C527	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C528	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C529	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C537	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C538	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C539	1-126-934-11	ELECT	220MF	20%	16V
C544	1-136-334-91	FILM	0.033MF	5%	630V
C546	1-110-632-11	FILM	0.019MF	3%	1.8KV
C547	1-162-117-00	CERAMIC	100PF	10%	500V
C548	1-110-630-11	FILM	0.62MF	5%	400V
C551	1-106-379-12	MYLAR	0.033MF	10%	200V
C552	1-106-343-00	MYLAR	0.001MF	10%	200V
C554	1-136-757-11	FILM	0.33MF	5%	400V
C557	1-110-630-11	FILM	0.62MF	5%	400V
C562	1-126-941-11	ELECT	470MF	20%	25V
C563	1-126-941-11	ELECT	470MF	20%	25V
C564	1-107-655-11	ELECT	47MF	20%	250V
C565	1-102-228-00	CERAMIC	470PF	10%	500V
C566	1-102-228-00	CERAMIC	470PF	10%	500V
C567	1-102-228-00	CERAMIC	470PF	10%	500V
C568	1-162-114-00	CERAMIC	0.0047MF		2KV
C569	1-106-381-12	MYLAR	0.039MF	99%	200V
C571	1-107-650-11	ELECT	3.3MF	20%	250V
C572	1-128-577-11	ELECT	0.47MF	20%	100V
C573	1-102-030-00	CERAMIC	330PF	10%	500V
C574	1-106-383-00	MYLAR	0.047MF	10%	200V
C575	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C576	⚠ 1-162-129-91	CERAMIC	150PF	10%	2KV
C577	⚠ 1-162-116-91	CERAMIC	680PF	10%	2KV
C578	1-106-359-00	MYLAR	0.0047MF	10%	200V
C579	⚠ 1-162-116-91	CERAMIC	680PF	10%	2KV
C580	1-123-024-21	ELECT	33MF		160V
C581	1-106-361-00	MYLAR	0.0056MF	10%	100V
C582	1-124-126-00	ELECT	47MF	20%	16V
C585	1-130-471-00	FILM	0.001MF	5%	50V
C1551	1-124-903-11	ELECT	1MF	20%	50V
C1553	1-126-941-11	ELECT	470MF	20%	25V
C1554	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1556	1-124-122-11	ELECT	100MF	20%	50V
C1557	1-102-942-00	CERAMIC	5PF	0.5PF	50V
C1558	1-101-821-00	CERAMIC	0.0022MF		500V
C1559	1-106-383-00	MYLAR	0.047MF	10%	100V
C1560	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1562	1-137-423-11	MYLAR	0.15MF	10%	100V
C1563	1-126-941-11	ELECT	470MF	20%	25V
C1564	1-136-853-11	FILM	0.56MF	5%	200V
C1595	1-136-177-00	FILM	1MF	5%	50V
C2501	1-104-665-11	ELECT	100MF	20%	25V
C2502	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2503	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2504	1-104-665-11	ELECT	100MF	20%	25V
C2505	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2506	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V
C2507	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2508	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C2509	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C2510	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2511	1-124-903-11	ELECT	1MF	20%	50V
C2512	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2513	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C3501	1-162-558-11	CERAMIC	100PF	10%	2KV
C3502	1-162-558-11	CERAMIC	100PF	10%	2KV
C3552	1-102-244-00	CERAMIC	220PF	10%	500V
C3553	1-129-928-91	FILM	0.0027MF	5%	630V (KV-W28MN11/MH11)
C3553	1-136-557-11	FILM	0.0033MF	10%	630V (KV-W32MN11/MH11)
C3554	1-129-718-00	FILM	0.022MF	10%	630V
C4601	1-124-126-00	ELECT	47MF	20%	16V
C4602	1-124-126-00	ELECT	47MF	20%	16V
C4603	1-124-126-00	ELECT	47MF	20%	16V

<CONNCTOR>

CN501	1-764-607-11	CONNECTOR, BOARD TO BOARD 8P	
CN502	1-764-607-11	CONNECTOR, BOARD TO BOARD 8P	
CN503	1-764-607-11	CONNECTOR, BOARD TO BOARD 8P	
CN504	1-764-818-11	CONNECTOR, BOARD TO BOARD 10P	
CN505	1-764-607-11	CONNECTOR, BOARD TO BOARD 8P	
CN506	1-764-818-11	CONNECTOR, BOARD TO BOARD 10P	
CN508	1-764-812-11	CONNECTOR, BOARD TO BOARD 11P	
CN513	1-695-915-11	TAB (CONTACT)	
CN514	1-695-915-11	TAB (CONTACT)	
CN515	1-766-244-11	PIN, CONNECTOR (PC BOARD) 6P	
CN516	1-764-607-11	CONNECTOR, BOARD TO BOARD 8P	
CN517	1-764-821-11	CONNECTOR, BOARD TO BOARD 15P	
CN525	*1-580-798-11	CONNECTOR PIN (DY) 6P	

<DIODE>

D501	8-719-052-09	DIODE FMG-36S-LF024-104
D502	8-719-404-46	DIODE MA110
D503	8-719-404-46	DIODE MA110
D504	8-719-404-46	DIODE MA110
D505	8-719-914-43	DIODE DAN202K
D506	8-719-404-46	DIODE MA110
D508	8-719-914-44	DIODE DAP202K
D509	8-719-403-02	DIODE MA3240M-TX
D511	8-719-404-46	DIODE MA110
D512	8-719-105-82	DIODE RD5.1M-B2
D514	8-719-159-85	DIODE RD2.0MB
D515	8-719-404-46	DIODE MA110
D516	8-719-404-46	DIODE MA110
D517	8-719-404-46	DIODE MA110
D522	8-719-045-42	DIODE DD52RC
D524	8-719-302-43	DIODE EL1Z
D525	8-719-302-43	DIODE EL1Z
D526	8-719-302-43	DIODE EL1Z
D527	8-719-302-43	DIODE EL1Z
D528	8-719-302-43	DIODE EL1Z
D529	8-719-908-03	DIODE GP08D
D530	8-719-018-82	DIODE RGP02-20EL-6394
D531	8-719-908-03	DIODE GP08D
D535	8-719-105-82	DIODE RD5.1M-B2
D536	8-719-404-46	DIODE MA110

REF.NO.	PART NO.	DESCRIPTION	REMARK
D570	8-719-110-76	DIODE RD33ESB1	
D571	8-719-404-46	DIODE MA110	
D1551	8-719-923-86	DIODE MTZJ-T-77-15	
D1557	8-719-908-03	DIODE GP08D	
D2501	8-719-914-43	DIODE DAN202K	
D2503	8-719-914-42	DIODE DA204K	
D2504	8-719-401-32	DIODE MA3047M-TX	
D2505	8-719-401-32	DIODE MA3047M-TX	
D3550	8-719-970-87	DIODE ERA38-06	
D3551	8-719-300-33	DIODE RU-3AM	
D3552	8-719-970-87	DIODE ERA38-06	
		<FERRITE BEAD>	
FB501	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB502	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB3550	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
		<IC>	
IC502	8-759-083-85	IC LA7856A	
IC507	8-759-981-65	IC LM2903M	
IC1551	8-759-192-71	IC STV9379	
IC2501	8-759-729-03	IC NJM2903D	
IC2502	8-759-729-03	IC NJM2903D	
IC4601	8-759-189-48	IC PQ12RE11	
IC4602	8-759-701-59	IC NJM78M09FA	
		<CONDCTOR CHIP>	
JR1	1-216-295-00	CONDCTOR, CHIP	
JR501	1-216-295-00	CONDCTOR, CHIP	
JR503	1-216-295-00	CONDCTOR, CHIP	
JR510	1-216-295-00	CONDCTOR, CHIP	
		<COIL>	
L501	1-406-977-21	COIL, CHOKE 100UH	
L504	1-422-613-11	COIL, AIR CORE	
L509	1-459-474-11	COIL (WITH CORE)	
L510	1-412-537-31	INDUCTOR 100UH	
L511	1-412-537-31	INDUCTOR 100UH	
L512	1-412-537-31	INDUCTOR 100UH	
L513	1-459-111-00	COIL, DRAM CORE (CDI)	
L514	1-412-528-11	INDUCTOR 18UH	
L516	1-411-188-11	COIL, CHOKE 18.5UH	
L517	1-412-552-11	INDUCTOR 2.2MMH	
L519	1-422-613-11	COIL, AIR CORE	
L1551	1-412-532-11	INDUCTOR 39UH	
L1552	1-412-524-11	INDUCTOR 8.2UH	
L1553	1-412-532-11	INDUCTOR 39UH	
L3550	1-406-672-11	COIL, CHOKE 1.5MMH	
		<TRANSISTOR>	
Q501	8-729-900-51	TRANSISTOR DTA114TK	
Q502	8-729-901-01	TRANSISTOR DTC144EK	
Q506	8-729-200-17	TRANSISTOR 2SA1091-O	
Q507	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q508	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q511	8-729-931-45	TRANSISTOR IRF614	
Q512	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q514	8-729-017-64	TRANSISTOR 2SC3997-YB	
Q555	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1551	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1552	8-729-030-45	TRANSISTOR IRFIBC30G-LF	
Q2501	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q2503	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q2504	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2505	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2506	8-729-216-22	TRANSISTOR 2SA1162-G	
Q3550	8-729-011-06	TRANSISTOR 2SC3840K	
		<RESISTOR>	
R501	1-215-452-00	METAL 20K 1% 1/4W	
R502	1-216-295-00	CONDCTOR, CHIP	
R503	1-216-111-00	METAL GLAZE 390K 5% 1/10W	
R504	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W (KV-W28MN11/MH11)	
R504	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W (KV-W32MN11/MH11)	
R506	1-215-909-11	METAL OXIDE 47 5% 3W F	
R507	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R508	1-216-691-11	METAL CHIP 47K 0.50% 1/10W	
R509	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R510	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R512	1-216-650-11	METAL CHIP 910 0.50% 1/10W	
R513	1-215-476-00	METAL 200K 1% 1/4W	
R514	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R515	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R516	1-220-317-91	METAL GLAZE 220K 5% 1/4W	
R517	1-216-385-11	METAL OXIDE 0.47 5% 3W F	
R518	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R519	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R520	1-215-909-11	METAL OXIDE 47 5% 3W F	
R521	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R522	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R523	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R524	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R525	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R526	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R527	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R528	1-216-675-11	METAL CHIP 10K 0.50% 1/10W	
R529	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R530	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R531	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R532	1-214-753-00	METAL 10K 1% 1/4W	
R533	1-202-830-00	SOLID 10K 10% 1/2W	
R535	1-202-830-00	SOLID 10K 10% 1/2W	
R536	1-208-817-11	METAL CHIP 30K 0.50% 1/10W	
R537	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R538	1-216-081-00	METAL GLAZE 22K 5% 1/10W (KV-W28MN11/MH11)	
R538	1-216-079-00	METAL GLAZE 18K 5% 1/10W (KV-W32MN11/MH11)	
R539	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R540	1-216-434-11	METAL OXIDE 1.8K 5% 1W F	
R541	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R542	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R543	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R544	1-216-345-11	METAL OXIDE 0.47 5% 1W F	
R545	1-249-377-11	CARBON 0.47 5% 1/4W F	
R546	1-249-377-11	CARBON 0.47 5% 1/4W F	
R547	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R548	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R549	1-249-398-11	CARBON 27 5% 1/4W F	
R550	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	

D D2

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R551	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R552	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R553	1-249-377-11	CARBON	0.47	5%	1/4W	F
R554	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R555	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R556	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R557	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R558	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R559	1-216-662-11	METAL CHIP	3K	0.50%	1/10W	
R560	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R563	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R564	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R565	1-216-481-11	METAL OXIDE	1.2K	5%	3W	F
R566	1-215-918-00	METAL OXIDE	1.5K	5%	3W	F
R567	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R568	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R569	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R576	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R577	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R578	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R579	1-247-893-11	CARBON	390K	5%	1/4W	
R580	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R582	1-214-902-81	METAL	36K	1%	1/2W	
R583	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W	
R584	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R585	1-202-883-11	SOLID	680K	20%	1/2W	
R586	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R587	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R588	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R589	1-215-905-11	METAL OXIDE	10	5%	3W	F
R590	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R591	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R592	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R593	1-215-437-00	METAL	4.7K	1%	1/4W	
R595	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R597	1-216-393-00	METAL OXIDE	2.2	5%	3W	F
R598	1-215-914-11	METAL OXIDE	330	5%	3W	F
R1552	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1553	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1554	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1556	1-208-803-11	METAL CHIP	7.5K	0.50%	1/10W	
R1557	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1561	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1562	1-215-459-00	METAL	39K	1%	1/4W	
R1563	1-249-385-11	CARBON	2.2	5%	1/4W	F
R1564	1-216-376-00	METAL OXIDE	3.9	5%	2W	F
R1565	1-216-392-11	METAL OXIDE	1.8	5%	3W	F
R1566	1-215-913-11	METAL OXIDE	220	5%	3W	F
R1567	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1570	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1595	1-216-664-11	METAL CHIP	3.6K	0.50%	1/10W	
R1596	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W	
R2501	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R2503	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R2505	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R2506	1-208-785-11	METAL CHIP	1.3K	0.50%	1/10W	
R2507	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2508	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R2509	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R2510	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2511	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R2512	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2513	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2514	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R2515	1-208-801-11	METAL CHIP	6.2K	0.50%	1/10W	
R2516	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2517	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2518	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2522	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2523	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2525	1-216-295-00	CONDCTOR, CHIP				
R2527	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2528	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R2529	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2532	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R2533	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2534	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2536	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R2537	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R2538	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R2539	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R2540	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2545	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2546	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2547	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2549	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2550	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3550	1-216-483-11	METAL OXIDE	2.7K	5%	3W	F
R3551	1-216-483-11	METAL OXIDE	2.7K	5%	3W	F
R3552	1-216-439-00	METAL OXIDE	12K	5%	1W	F
R3553	1-220-313-11	METAL GLAZE	100K	5%	1/4W	
R3554	1-220-313-11	METAL GLAZE	100K	5%	1/4W	
R3555	1-220-313-11	METAL GLAZE	100K	5%	1/4W	
R3557	1-216-483-11	METAL OXIDE	2.7K	5%	3W	F

<VARIABLE RESISTOR>

RV501	1-241-763-11	RES, ADJ, CERMET 4.7K	

<SWITCH>

S501	1-572-707-11	SWITCH, LEVER	
S502	1-572-707-11	SWITCH, LEVER	

<SPARK GAP>

SG501	1-519-422-11	GAP, SPARK	

<TRANSFORMER>

T501	1-427-835-11	HLT	
T502	1-427-762-11	TRANSFORMER, FERRITE (HDT)	
T503	⚠ 1-453-150-11	TRANSFORMER ASSY, FLYBACK	
T504	⚠ 1-427-776-11	TRANSFORMER, FERRITE (EHT)	
T3550	1-426-896-11	TRANSFORMER, FERRITE (DFT)	

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*A-1346-265-A D2 BOARD, COMPLETE
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<CAPACITOR>

C6501	1-163-020-00	CERAMIC CHIP 0.0082MF	10%	50V
C6502	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C6503	1-164-005-11	CERAMIC CHIP 0.47MF		16V
C6504	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C6505	1-163-038-91	CERAMIC CHIP 0.1MF		25V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C6506	1-124-126-00	ELECT	47MF	20%	16V
C6507	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C6508	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C6509	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C6511	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C6513	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C6514	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C6515	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C6516	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C6517	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C6518	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C6519	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C6520	1-162-568-11	CERAMIC CHIP	0.33MF	10%	16V
C6521	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C6522	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C6523	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
		<CONNECTOR>			
CN6501	1-764-814-11	CONNECTOR, BOARD TO BOARD 15P			
		<IC>			
IC6501	8-759-708-05	IC NJM78L05A			
IC6502	8-759-251-48	IC UPD358GR-E1			
IC6503	8-752-347-92	IC CXD2018Q			
IC6504	8-759-251-48	IC UPD358GR-E1			
		<CONDCTOR CHIP>			
JR6501	1-216-295-00	CONDCTOR, CHIP			
JR6506	1-216-295-00	CONDCTOR, CHIP			
		<COIL>			
L6501	1-408-409-00	INDUCTOR	10UH		
L6502	1-408-409-00	INDUCTOR	10UH		
		<TRANSISTOR>			
Q6502	8-729-230-49	TRANSISTOR 2SC2712-YG			
		<RESISTOR>			
R6503	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R6504	1-216-025-00	METAL GLAZE	100	5%	1/10W
R6505	1-216-025-00	METAL GLAZE	100	5%	1/10W
R6506	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R6507	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R6508	1-216-025-00	METAL GLAZE	100	5%	1/10W
R6509	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R6510	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R6511	1-216-295-00	CONDCTOR, CHIP			
R6512	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R6513	1-208-789-11	METAL CHIP	2K	0.50%	1/10W
R6514	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R6515	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R6516	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R6517	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R6518	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R6519	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R6520	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R6521	1-216-656-11	METAL CHIP	1.6K	0.50%	1/10W
R6522	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R6523	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R6524	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R6525	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R6526	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R6527	1-216-025-00	METAL GLAZE	100	5%	1/10W
R6528	1-216-025-00	METAL GLAZE	100	5%	1/10W
R6540	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
		**********			
	*A-1372-067-A	H3 BOARD, COMPLETE (KV-W28MN11/MH11)			
		**********			
	*A-1372-072-A	H3 BOARD, COMPLETE (KV-W32MN11/MH11)			
		**********			
		<CAPACITOR>			
C1931	1-124-126-00	ELECT	47MF	20%	16V
		<CONNECTOR>			
CN1931	*1-564-506-11	PLUG, CONNECTOR 3P			
		<IC>			
IC1931	8-741-790-11	IC SBX1790-11			
		<RESISTOR>			
R1931	1-247-807-31	CARBON	100	5%	1/4W
		**********			
	*A-1372-068-A	H1 BOARD, COMPLETE (KV-W28MN11/MH11)			
		**********			
	*A-1372-070-A	H1 BOARD, COMPLETE (KV-W32MN11/MH11)			
		**********			
		<CONNECTOR>			
CN1911	*1-564-506-11	PLUG, CONNECTOR 3P			
CN1912	*1-564-507-11	PLUG, CONNECTOR 4P			
CN1913	*1-564-507-11	PLUG, CONNECTOR 4P			
		<JACK>			
J1911	1-507-806-00	JACK 1P			
		<RESISTOR>			
R1911	1-249-420-11	CARBON	1.8K	5%	1/4W
R1912	1-249-423-11	CARBON	3.3K	5%	1/4W
R1913	1-249-425-11	CARBON	4.7K	5%	1/4W
R1914	1-249-428-11	CARBON	8.2K	5%	1/4W
R1915	1-249-409-11	CARBON	220	5%	1/4W
R1916	1-249-409-11	CARBON	220	5%	1/4W
R1917	1-249-409-11	CARBON	220	5%	1/4W
R1918	1-249-409-11	CARBON	220	5%	1/4W
R1919	1-249-418-11	CARBON	1.2K	5%	1/4W
		<SWITCH>			
S1911	1-571-532-21	SWITCH, TACTIL			

H1 H2 H4

REF.NO.	PART NO.	DESCRIPTION				REMARK
S1912	1-571-532-21	SWITCH, TACTIL				
S1913	1-571-532-21	SWITCH, TACTIL				
S1914	1-571-532-21	SWITCH, TACTIL				
S1915	1-571-532-21	SWITCH, TACTIL				
**********						
*A-1372-069-A		H2 BOARD, COMPLETE (KV-W28MN11/MH11)				
		**********				
*A-1372-071-A		H2 BOARD, COMPLETE (KV-W32MN11/MH11)				
		**********				
*4-396-124-01		HOLDER (E), LED				
		<CAPACITOR>				
C1921	1-124-126-00	ELECT	47MF	20%	16V	
C1922	1-126-933-11	ELECT	100MF	20%	16V	
C1923	1-124-126-00	ELECT	47MF	20%	16V	
		<CONNECTOR>				
CN1921	*1-564-506-11	PLUG, CONNECTOR 3P				
CN1922	*1-564-512-11	PLUG, CONNECTOR 9P				
CN1923	*1-564-506-11	PLUG, CONNECTOR 3P				
CN1924	*1-564-507-11	PLUG, CONNECTOR 4P				
CN1925	*1-564-507-11	PLUG, CONNECTOR 4P				
CN1926	*1-564-506-11	PLUG, CONNECTOR 3P				
		<DIODE>				
D1921	8-719-920-66	DIODE SLR-54VC12				(KV-W28MN11/MH11)
D1921	8-719-311-89	DIODE SEL1222R-C				(KV-W32MN11/MH11)
D1922	8-719-920-66	DIODE SLR-54VC12				(KV-W28MN11/MH11)
D1922	8-719-311-89	DIODE SEL1222R-C				(KV-W32MN11/MH11)
D1923	8-719-920-66	DIODE SLR-54VC12				(KV-W28MN11/MH11)
D1923	8-719-311-89	DIODE SEL1222R-C				(KV-W32MN11/MH11)
D1924	8-719-908-03	DIODE GP08D				(KV-W28MN11/MH11)
		<FERRITE BEAD>				
FB1901	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB1902	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB1903	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB1904	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB1905	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB1906	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB1907	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
		<TRANSISTOR>				
Q1921	8-729-620-05	TRANSISTOR 2SC2603TP-EF				
Q1922	8-729-900-80	TRANSISTOR DTC114ES				
Q1923	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q1924	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1925	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R1921	1-249-413-11	CARBON	470	5%	1/4W	
R1922	1-249-414-11	CARBON	560	5%	1/4W	
R1923	1-249-415-11	CARBON	680	5%	1/4W	
R1924	1-249-416-11	CARBON	820	5%	1/4W	
R1925	1-249-417-11	CARBON	1K	5%	1/4W	
R1926	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1927	1-249-417-11	CARBON	1K	5%	1/4W	
R1928	1-249-437-11	CARBON	47K	5%	1/4W	
R1929	1-249-433-11	CARBON	22K	5%	1/4W	
R1930	1-249-433-11	CARBON	22K	5%	1/4W	
R1932	1-249-887-11	CARBON	33	5%	1/4W	F
R1933	1-247-895-00	CARBON	470K	5%	1/4W	
		<RELAY>				
RY1901	1-515-833-11	RELAY				
		<SWITCH>				
S1921	1-571-532-21	SWITCH, TACTIL				
S1922	1-571-532-21	SWITCH, TACTIL				
S1923	1-571-532-21	SWITCH, TACTIL				
S1924	1-571-532-21	SWITCH, TACTIL				
S1925	1-571-532-21	SWITCH, TACTIL				
**********						
*A-1372-073-A		H4 BOARD, COMPLETE (KV-W32MN11/MH11)				
		**********				
*A-1372-075-A		H4 BOARD, COMPLETE (KV-W28MN11/MH11)				
		**********				
		<CAPACITOR>				
C1941	1-126-933-11	ELECT	100MF	20%	16V	
C1942	1-101-004-00	CERAMIC	0.01MF		50V	
C1943	1-126-933-11	ELECT	100MF	20%	16V	
C1944	1-124-903-11	ELECT	1MF	20%	50V	
C1945	1-124-903-11	ELECT	1MF	20%	50V	
		<CONNECTOR>				
CN1941	*1-564-513-11	PLUG, CONNECTOR 10P				
		<DIODE>				
D1941	8-719-121-24	DIODE RD9.1ES-L				
D1942	8-719-121-24	DIODE RD9.1ES-L				
D1943	8-719-121-24	DIODE RD9.1ES-L				
D1944	8-719-121-24	DIODE RD9.1ES-L				
D1945	8-719-121-24	DIODE RD9.1ES-L				
		<JACK>				
J1941	1-764-142-11	TERMINAL BLOCK, S 3P				
		<TRANSISTOR>				
Q1941	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R1941	1-247-804-11	CARBON	75	5%	1/4W	
R1942	1-249-422-11	CARBON	2.7K	5%	1/4W	
R1943	1-247-804-11	CARBON	75	5%	1/4W	
R1944	1-247-883-00	CARBON	150K	5%	1/4W	
R1946	1-247-883-00	CARBON	150K	5%	1/4W	
R1948	1-249-429-11	CARBON	10K	5%	1/4W	
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REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1380-478-A	K BOARD, COMPLETE (KV-W32MN11/MH11) **********				
	*A-1380-480-A	K BOARD, COMPLETE (KV-W28MN11/MH11) **********				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C3201	1-126-964-11	ELECT	10MF	20%	50V	
C3202	1-126-964-11	ELECT	10MF	20%	50V	
C3203	1-124-126-00	ELECT	47MF	20%	16V	
C3204	1-124-126-00	ELECT	47MF	20%	16V	
C3205	1-126-953-11	ELECT	2200MF	20%	35V	
C3206	1-136-165-00	FILM	0.1MF	5%	50V	
C3207	1-126-953-11	ELECT	2200MF	20%	35V	
C3208	1-136-165-00	FILM	0.1MF	5%	50V	
C3210	1-136-165-00	FILM	0.1MF	5%	50V	
C3211	1-136-165-00	FILM	0.1MF	5%	50V	
C3214	1-124-903-11	ELECT	1MF	20%	50V	
		<CONNECTOR>				
CN3201	*1-564-508-11	PLUG, CONNECTOR 5P				
CN3202	*1-564-507-11	PLUG, CONNECTOR 4P				
CN3203	*1-564-509-11	PLUG, CONNECTOR 6P				
		<DIODE>				
D3201	8-719-109-84	DIODE RD5.1ESB1				
		<IC>				
IC3201	8-759-190-89	IC TDA7265				
		<TRANSISTOR>				
Q3201	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q3202	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q3203	8-729-119-78	TRANSISTOR 2SC2785-HFE				(KV-W28MN11/MH11)
		<RESISTOR>				
R3201	1-249-430-11	CARBON	12K	5%	1/4W	
R3202	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3203	1-249-414-11	CARBON	560	5%	1/4W	
R3204	1-249-432-11	CARBON	18K	5%	1/4W	
R3205	1-249-414-11	CARBON	560	5%	1/4W	
R3206	1-249-432-11	CARBON	18K	5%	1/4W	
R3207	1-249-430-11	CARBON	12K	5%	1/4W	
R3208	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3209	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R3210	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R3211	1-249-426-11	CARBON	5.6K	5%	1/4W	
R3212	1-249-429-11	CARBON	10K	5%	1/4W	
R3214	1-249-426-11	CARBON	5.6K	5%	1/4W	
R3219	1-249-423-11	CARBON	3.3K	5%	1/4W	
R3220	1-249-433-11	CARBON	22K	5%	1/4W	
R3222	1-249-417-11	CARBON	1K	5%	1/4W	
R3223	1-249-437-11	CARBON	47K	5%	1/4W	
R3224	1-249-441-11	CARBON	100K	5%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1388-176-A	J BOARD, COMPLETE **********				
		<CAPACITOR>				
C430	1-124-126-00	ELECT	47MF	20%	16V	
C431	1-124-126-00	ELECT	47MF	20%	16V	
C432	1-124-126-00	ELECT	47MF	20%	16V	
C433	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C434	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C455	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C456	1-163-257-11	CERAMIC CHIP	180PF	5%	50V	
C457	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C458	1-124-126-00	ELECT	47MF	20%	16V	
C459	1-163-257-11	CERAMIC CHIP	180PF	5%	50V	
C460	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C901	1-126-103-11	ELECT	470MF	20%	16V	
C902	1-124-903-11	ELECT	1MF	20%	50V	
C903	1-124-903-11	ELECT	1MF	20%	50V	
C904	1-124-903-11	ELECT	1MF	20%	50V	
C905	1-124-903-11	ELECT	1MF	20%	50V	
C906	1-124-903-11	ELECT	1MF	20%	50V	
C907	1-101-004-00	CERAMIC	0.01MF		50V	
C908	1-126-933-11	ELECT	100MF	20%	16V	
C909	1-126-933-11	ELECT	100MF	20%	16V	
C910	1-124-126-00	ELECT	47MF	20%	16V	
C911	1-124-126-00	ELECT	47MF	20%	16V	
C912	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C913	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C914	1-124-126-00	ELECT	47MF	20%	16V	
C915	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C916	1-101-004-00	CERAMIC	0.01MF		50V	
C917	1-124-903-11	ELECT	1MF	20%	50V	
C918	1-124-903-11	ELECT	1MF	20%	50V	
C919	1-124-903-11	ELECT	1MF	20%	50V	
C920	1-124-903-11	ELECT	1MF	20%	50V	
C921	1-126-233-11	ELECT	22MF	20%	50V	
C922	1-126-233-11	ELECT	22MF	20%	50V	
C923	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C924	1-101-004-00	CERAMIC	0.01MF		50V	
C925	1-126-233-11	ELECT	22MF	20%	50V	
C926	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C927	1-126-233-11	ELECT	22MF	20%	50V	
C928	1-124-126-00	ELECT	47MF	20%	16V	
C929	1-124-126-00	ELECT	47MF	20%	16V	
C930	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C931	1-126-103-11	ELECT	470MF	20%	16V	
C932	1-124-126-00	ELECT	47MF	20%	16V	
C933	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C935	1-126-103-11	ELECT	470MF	20%	16V	
C936	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	
C937	1-126-933-11	ELECT	100MF	20%	16V	
C938	1-124-126-00	ELECT	47MF	20%	16V	
		<CONNECTOR>				
CN901	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P				
CN902	*1-564-525-11	PLUG, CONNECTOR 10P				
CN903	1-564-517-11	PLUG, CONNECTOR 2P				
		<DIODE>				
D901	8-719-121-24	DIODE RD9.1ES-L				

J

REF.NO.	PART NO.	DESCRIPTION	REMARK
D902	8-719-121-24	DIODE RD9.1ES-L	
D903	8-719-121-24	DIODE RD9.1ES-L	
D904	8-719-121-24	DIODE RD9.1ES-L	
D905	8-719-121-24	DIODE RD9.1ES-L	
D906	8-719-121-24	DIODE RD9.1ES-L	
D907	8-719-121-24	DIODE RD9.1ES-L	
D908	8-719-121-24	DIODE RD9.1ES-L	
D909	8-719-121-24	DIODE RD9.1ES-L	
D910	8-719-121-24	DIODE RD9.1ES-L	
D911	8-719-121-24	DIODE RD9.1ES-L	
D912	8-719-121-24	DIODE RD9.1ES-L	
D915	8-719-121-24	DIODE RD9.1ES-L	
D916	8-719-121-24	DIODE RD9.1ES-L	
D917	8-719-121-24	DIODE RD9.1ES-L	
D919	8-719-121-24	DIODE RD9.1ES-L	
D920	8-719-121-24	DIODE RD9.1ES-L	
D921	8-719-121-24	DIODE RD9.1ES-L	
D922	8-719-121-24	DIODE RD9.1ES-L	
D923	8-719-121-24	DIODE RD9.1ES-L	
D924	8-719-121-24	DIODE RD9.1ES-L	
D927	8-719-121-24	DIODE RD9.1ES-L	
D930	8-719-121-24	DIODE RD9.1ES-L	
D931	8-719-800-76	DIODE 1SS226	
		<IC>	
IC460	8-759-100-96	IC UPC4558G2	
IC901	8-752-068-46	IC CXA1855S	
		<JACK>	
J901	1-573-967-11	BLOCK, (S) TERMINAL	
J902	1-573-968-11	BLOCK, (S) TERMINAL	
		<COIL>	
L902	1-412-537-31	INDUCTOR 100UH	
		<TRANSISTOR>	
Q420	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q421	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q422	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q423	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q424	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q425	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q901	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q902	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q903	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q905	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q906	8-729-216-22	TRANSISTOR 2SA1162-G	
Q907	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q908	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q909	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q910	8-729-216-22	TRANSISTOR 2SA1162-G	
Q911	8-729-216-22	TRANSISTOR 2SA1162-G	
Q912	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q914	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q915	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q916	8-729-900-53	TRANSISTOR DTC114EK	
Q917	8-729-900-53	TRANSISTOR DTC114EK	
Q918	8-729-216-22	TRANSISTOR 2SA1162-G	

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R430	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R431	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R432	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R433	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R434	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R435	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R436	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R437	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R438	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R439	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R440	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R441	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R442	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R444	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R448	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R449	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R450	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R451	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R452	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R453	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R454	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R901	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R902	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R903	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R904	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R905	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R906	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R907	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R908	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R909	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R910	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R911	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R912	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R913	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R914	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R915	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R916	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R917	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R918	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R919	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R920	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R921	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R922	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R923	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R924	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R925	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R926	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R927	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R928	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R929	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R930	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R931	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R932	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R933	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R934	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R936	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R937	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R938	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R939	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R940	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R941	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R942	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	

9829

SONY
SERVICE MANUAL

AG-1 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-W28MH11	RM-850	HK	SCC-H23B-A	KV-W32MH11	RM-850	HK	SCC-H23A-A
KV-W28MN11	RM-850	GE	SCC-H22A-A	KV-W32MN11	RM-850	GE	SCC-H22B-A
				KV-W32MH11	RM-850	WB	SCC-H24A-A

CORRECTION-1

☛ : Corrected partion

File this correction with the Service manul.

SECTION 2 DISASSEMBLY

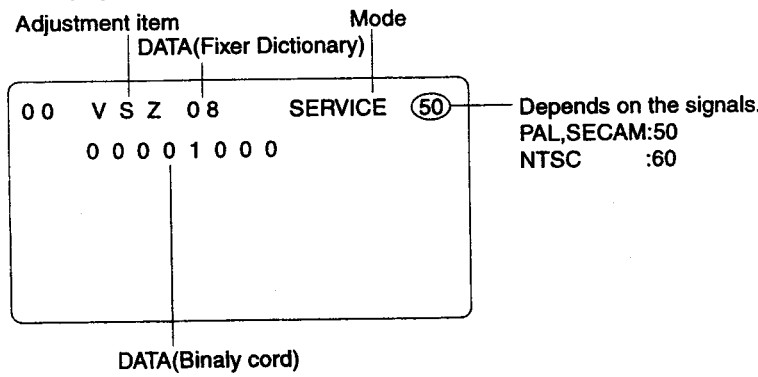
2-8.EXTENSION CABLE AND BOARD(See page17)

DESCRIPTION	PART No.
Extension Board 40pin	1-589-554-11

SECTION 4 CIRCUIT ADJUSTMENTS

4-1.ADJUSTMENTS WITH COMMANDER(See page26)

The screen Display



*Input data are different according to model.

Item / Model	7	6	5	4	3	2	1	0
KV-W28MH11	0	0	0	1	0	0	0	1
KV-W28MN11	0	0	0	1	0	0	0	1
KV-W32MH11	0	0	0	0	0	0	0	1
KV-W32MN11	0	0	0	0	0	0	0	1

※ Please file according to model size. ..... ■

SECTION 4 CIRCUIT ADJUSTMENTS

4-2.ADJUSTMENT METHOD(See page27)

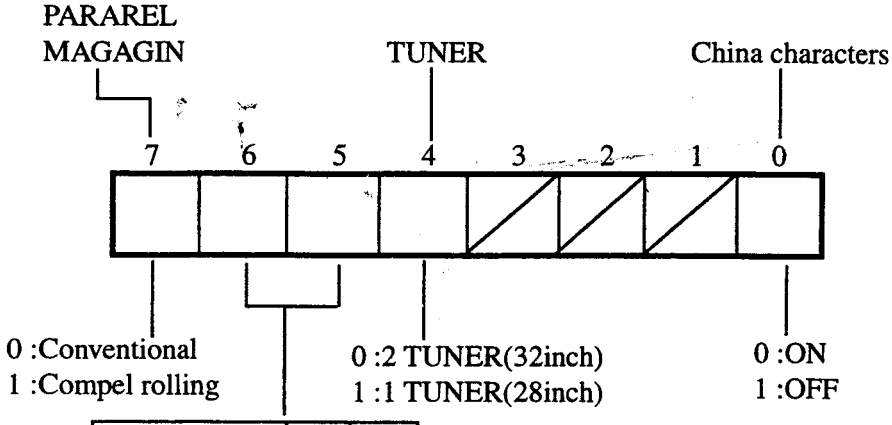
Service data Note

1.Data renge area: 00-09,0A-0F,10-19,1A-1F,20-29,2A-2F,30-39,3A-3F.

2.Standard data : Those are the standard data values written on the microprocessor. There for the data values of the modes are respectively stored in the memory.
In case of a device replacement,adjustment by rewriting the data value is necessary for some items afterwards.

OP 0 :Set the option to item.(each bit=1 option)

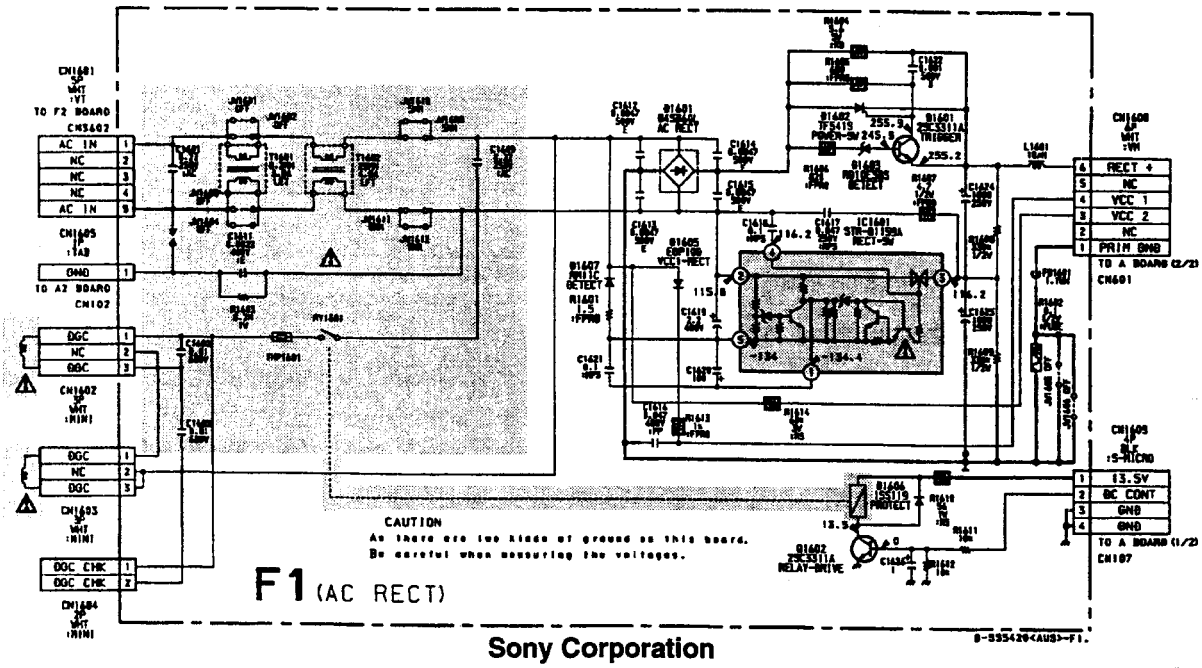
OP 1 :Input data are different according to model.



	6	5
Teletext Ver. 1	0	0
2	0	1
3	1	0

SECTION 5 DIAGRAM

5-3.PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS(See page56)F1 Board.



Sony Corporation
Consumer A&V Products Company
TV & Display Products Div.

9-965-542-91

6379

Englis
95IE0213
Printed in JAPA

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R943	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R945	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R946	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R947	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R949	1-216-295-00	CONDCTOR, CHIP				
R950	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R951	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R952	1-208-785-11	METAL CHIP	1.3K	0.50%	1/10W	
R953	1-216-184-00	METAL GLAZE	270	5%	1/8W	
R955	1-216-295-00	CONDCTOR, CHIP				
R956	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R962	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R963	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R964	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R965	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R966	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R968	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R969	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R972	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R973	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R976	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R977	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R979	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R980	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R982	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R983	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R985	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R986	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R987	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R988	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R989	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R990	1-216-176-11	METAL GLAZE	120	5%	1/8W	
R991	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R992	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R993	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R994	1-216-083-00	METAL GLAZE	27K	5%	1/10W	

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MISCELLANEOUS
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⚠1-409-951-11	COIL, DEMAGNETIZATION	(KV-W28MN11/MH11)
⚠1-409-952-11	COIL, DEMAGNETIZATION	(KV-W28MN11/MH11)
⚠1-409-953-11	COIL, DEMAGNETIZATION	(KV-W32MN11/MH11)
⚠1-409-954-11	COIL, DEMAGNETIZATION	(KV-W32MN11/MH11)
⚠1-452-616-11	NECK ASSY, PICTURE TUBE (NA323)	
1-452-724-11	COIL, NA ROTATION (RT-165)	
1-504-121-51	SPEAKER (5CM)	
1-504-771-11	SPEAKER (12CM)	
⚠1-540-006-12	CAP ASSY, HIGH-VOLTAGE	
1-543-653-11	CORE ASSY, BEAD(DIVISION TYPE)	
*1-555-110-00	CABLE, P-P	(KV-W32MN11/MH11)
*1-558-539-21	CABLE, P-P	(KV-W28MN11/MH11)
1-563-204-11	SOCKET, ANTENNA (PAL/SECAM)	(KV-W28MN11/MH11)
1-569-008-11	ADAPTER, CONVERSION 2P	
1-900-071-31	CONNECTOR ASSY	(KV-W28MN11/MH11)
1-900-138-08	CONNECTOR ASSY	(KV-W32MN11/MH11)
⚠8-451-449-11	DY Y28CIC2(MTY)	(KV-W28MN11/MH11)
⚠8-451-460-11	DY Y32CIC2M	(KV-W32MN11/MH11)
⚠8-735-023-05	PICTURE TUBE 32CII (W76KXS010X)	(KV-W32MN11/MH11)
⚠8-737-756-05	PICTURE TUBE 28CII (W66LCA010X)	(KV-W28MN11/MH11)

REF.NO.	PART NO.	DESCRIPTION	REMARK

****

ACCESSORIES AND PACKING MATERIALS
****

3-759-695-11	MANUAL, INSTRUCTION	
*4-032-113-01	REINFORSEMENT	(KV-W32MN11/MH11)
*4-045-489-01	INDIVIDUAL CARTON	(KV-W28MN11/MH11)
*4-045-792-01	INDIVIDUAL CARTON	(KV-W32MN11/MH11)
*4-045-490-01	CUSHION (UPPER) (ASSY)	(KV-W28MN11/MH11)
*4-045-491-01	CUSHION (LOWER) (ASSY)	(KV-W28MN11/MH11)
*4-045-782-01	CUSHION (UPPER) (ASSY)	(KV-W32MN11/MH11)
*4-045-783-01	CUSHION (LOWER) (ASSY)	(KV-W32MN11/MH11)
*4-045-784-01	BOARD, TOP	(KV-W32MN11/MH11)
*4-046-746-01	TRAY	(KV-W28MN11/MH11)
*4-046-791-01	TRAY	(KV-W32MN11/MH11)
*4-388-954-01	BAG, PROTECTION	
*4-396-077-01	JOINT	

REMOTE COMMANDER
****

1-467-983-11	REMOTE COMMANDER (RM-850)	
9-905-614-01	COVER, POCKET (FOR RM-850)	

ADAPTOR, CHANGE
****

1-466-779-11	ADAPTOR, CHANGE	(KV-W28MN11/W32MN11)
1-466-780-11	ADAPTOR, CHANGE	(KV-W28MN11/W32MN11)
1-569-008-11	ADAPTOR, CHANGE	(KV-W28MH11/W32MH11)